

**U.S. MARINE CORPS TECHNICAL MANUAL**

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**OPERATOR'S MANUAL  
WITH COMPONENTS LIST  
FOR  
RIFLE, 7.62 MM, G-3, NSN: 1005-LL-MC9-2697, P/N TBD**



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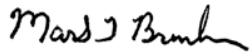
DEPARTMENT OF THE NAVY  
Headquarters, U.S. Marine Corps  
Washington, DC 20380-0001

30 April 2010

1. This Technical Manual (TM), authenticated for Marine Corps use and effective upon receipt, describes the technical characteristics and components for the rifle, 7.62 mm, G-3, NSN: 1005-LL-MC9-2697.
2. Submit notice of discrepancies or suggested changes on NAVMC 10772. The NAVMC may be submitted via the Internet using website <https://pubs.ala.usmc.mil/front.htm>, scrolling down to the NAVMC 10772 Tracking Program and following instructions provided. It may also be submitted by electronic mail to [mbmatcommarcorlogbases@logcom.usmc.mil](mailto:mbmatcommarcorlogbases@logcom.usmc.mil), or by mailing a paper copy of NAVMC 10772 addressed to: Commanding General, Marine Corps Systems Command, Attn: Assistant Commander Acquisition and Logistics (LOG/TP), 814 Radford Blvd., Albany, Georgia 31704-0343.

BY DIRECTION OF THE COMMANDANT OF THE MARINE CORPS

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# LIST OF EFFECTIVE PAGES/WORK PACKAGES

Date of issue for original manual is: 30 April 2010.

**TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 22 AND TOTAL NUMBER OF WORK PACKAGES IS 20 CONSISTING OF THE FOLLOWING:**

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## **WARNING SUMMARY**

This warning summary contains a general safety warning that must be understood and applied during operation and maintenance of this equipment. Failure to observe these precautions could result in serious injury or death to personnel.

### **WARNING**

Check the bore to ensure it is clean and free of obstruction. Failure to follow this warning may result in injury or death to personnel.

### **WARNING**

If the weapon is dropped or jarred with a loaded magazine in place, it could chamber a round. Failure to follow this warning may result in injury or death to personnel.

### **WARNING**

If a noticeable difference in sound or recoil of the weapon is experienced, stop firing. Either condition could indicate an incomplete powder burn and/or a projectile lodged in the bore.

**WARNING**

If the weapon stops firing with a live round in the chamber of a hot barrel, remove the round immediately. If the round cannot be removed within 10 seconds, wait 15 minutes with the weapon pointed in a safe direction. This will avoid possible injury to personnel from cook-off of the chambered round. Keep the face away from the ejection port while clearing a hot chamber. Failure to follow these warnings may result in injury or death to personnel.

**WARNING**

Immediately cease fire if an audible popping sound or reduced recoil is experienced during firing. DO NOT apply immediate action. DO NOT attempt to remove a projectile that is lodged in the barrel. Evacuate to higher echelon maintenance. Failure to follow these warnings may result in injury or death to personnel.

**WARNING**

Store ammunition under protective cover and away from excessive heat and extreme temperatures. Failure to follow this warning may result in injury or death to personnel.

**WARNING**

DO NOT attempt to disassemble a cartridge or any of its components. DO NOT polish brass components of cartridges. Failure to follow this warning may result in injury or death to personnel.

**WARNING**

Use only authorized ammunition manufactured to U.S. or NATO specifications. DO NOT fire seriously corroded ammunition, dented cartridges, cartridges with loose projectiles, cartridges exposed to extreme heat (135°F) until cooled, cartridges with the projectile pushed in (short rounds). Failure to follow these warnings may result in injury or death to personnel.

**WARNING**

DO NOT fire the weapon if water is present in the barrel. Failure to follow this warning may result in injury or death to personnel.

**WARNING**

Keep clear of the muzzle. Failure to follow this warning may result in injury or death to personnel.

**WARNING**

Confirm the weapon is unloaded and on SAFE before performing the following procedures. Failure to follow this warning may cause injury or death to personnel.

**WARNING**

Confirm the weapon is unloaded and on SAFE before performing the following procedures. Do not keep live ammunition near the work area. Failure to follow these warnings may cause injury or death to personnel.

**WARNING**

Do not interchange bolt heads between weapons. Failure to follow this warning may cause injury or death to personnel.

**WARNING**

Ensure the weapon is clear before performing the following procedures. DO NOT interchange parts from one weapon to another. Failure to follow these warnings may cause injury or death to personnel.

**WARNING**

Always assume every weapon is loaded until it is determined through visual and physical inspection that it is not. Procedures for clearing and unloading the weapon are outlined in WP 0005 00. Failure to follow this warning may result in injury or death to personnel.

**WARNING**

The magazine plate is under spring pressure.

**WARNING**

Do not store the weapon with live ammunition in either the chamber or magazine. Always assume every weapon is loaded until it is determined through visual and physical inspection that it is not loaded. Refer to WP 0005 00 for clearing and unloading procedures. Failure to follow these warnings may cause injury or death to personnel.

**CAUTION SUMMARY**

**CAUTION**

Ensure ammunition is free of sand, mud, moisture, frost, snow, ice, grease, or other foreign debris. Also, check the ammunition for dents in the cartridges or bad primers.

**CAUTION**

The use of oil or grease on cartridges is prohibited.

**CAUTION**

DO NOT remove the flash suppressor for any reason. Armorers are not authorized to remove it for cleaning purposes.

**CAUTION**

Areas with hot, dry climates usually contain blowing sand and fine dust. Deserts can be hot during daylight hours and freezing during hours of darkness. This will severely tax the weapon as well as other types of equipment. The weapon's continued operation will depend on strictly and routinely following detailed cleaning and lubricating procedures.

**CAUTION**

After the round is removed, the bolt is under tension.

**CAUTION**

Do not dry clean the weapon. Do not use hot water or other solvents to clean the weapon. This will remove the teflon lubricant built up as a result of using CLP.

**CAUTION**

Apply ONLY a light coat of CLP to the firing pin and the firing pin recess in the bolt.

**CAUTION**

DO NOT mix lubricants on the same weapon. The weapon must be cleaned thoroughly during any change from one lubricant to another. Dry cleaning solvent (SD) is recommended for cleaning before changing lubricants.

**CAUTION**

Ensure the swab goes completely through the flash suppressor. Do not reverse direction while the swab is in the bore or compensator.

**CAUTION**

When using a bore brush, do not reverse direction while the brush is in the bore.

**CAUTION**

Do not remove the inner heat shield.

**TECHNICAL MANUAL  
TM 8370-50117-OR/19**

**MARINE CORPS SYSTEMS COMMAND  
Quantico, VA, APRIL 2010**

**U.S. MARINE CORPS TECHNICAL MANUAL  
OPERATOR'S MANUAL  
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FOR

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## HOW TO USE THIS MANUAL

### INTRODUCTION

1. This manual contains operating instructions, maintenance procedures, troubleshooting procedures, and supporting information for the rifle, 7.62 mm, G-3. It is divided into five chapters.
2. This manual is written in work package format:
  - a. Chapters divide the manual into major categories of information (i.e., *General Information*, *Equipment Description and Data*, and *Principles of Operation*).
  - b. Each chapter is divided into work packages, which are identified by a 6-digit number (e.g., 0001 00, 0002 00) located at the upper right-hand corner of each page. The work package page number (e.g., 0001 00-1, 0001 00-2) is centered at the bottom of each page.
  - c. If a change package is issued to this manual, added work packages will use the 5th and 6th digits of their numbers to indicate new material. For instance, work packages inserted between WP 0001 00 and WP 0002 00 are numbered WP 0001 01, WP 0001 02.
3. Read through this manual to become familiar with its organization and contents before attempting to operate or maintain the weapon.

## CONTENTS OF THIS MANUAL

1. A *Warning Summary* and *Caution Summary* are located at the beginning of this manual. Become familiar with these warnings and cautions before operating or maintaining the equipment.
2. A *Table of Contents*, located in the front of this manual, lists all chapters and work packages in the publication. If you cannot find what you are looking for in the *Table of Contents*, refer to the alphabetical *Index* at the back of the manual.
3. Chapter 1, *General Information, Equipment Description and Data, and Principles of Operation*, provides general information about the equipment, identifies the major components and systems, and describes how the components and systems work.
4. Chapter 2, *Operator Instructions*, provides information about the proper use of the rifle, 7.62 mm, G-3.
5. Chapter 3, *Troubleshooting*, provides symptoms and procedures pertaining to failures that could occur during operation of the rifle, 7.62 mm, G-3.
6. Chapter 4, *Maintenance Instructions*, which includes *PMCS Introduction, and General Maintenance Instructions*, provides procedures to maintain the rifle, 7.62 mm, G-3 at the operator level.
7. Chapter 5, *Supporting Information*, provides information pertaining to references, components listing, and an expendable and durable items list.
8. An alphabetical *Index* is located at the back of this manual.

## FEATURES OF THIS MANUAL

1. This manual contains information on operating and maintaining the G-3 rifle.
2. WARNINGS, CAUTIONS, NOTES, subject headings, and other important information are highlighted in **BOLD** print as a visual aid.

### **WARNING**

A WARNING indicates a hazard which may result in injury or death to personnel.

### **CAUTION**

A CAUTION is a reminder of safety practices or directs attention to usage practices that may result in damage to equipment.

### **NOTE**

A NOTE is a statement containing information that will make the procedures easier to perform.

3. Statements and words of particular interest may be printed in CAPITAL LETTERS to create emphasis.

4. Within a procedural step, reference may be made to another chapter or work package in this manual or to another manual. These references indicate where you should look for more complete information. If you are told: “Attach the bore brush to the end of the flexible rod (WP 0013 00)”, go to WP 0013 00 in this manual for instructions.
5. Illustrations are placed after, and close to, the procedural steps to which they apply. Callouts placed on art are text or numbers.

**END OF WORK PACKAGE**

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## **CHAPTER 1**

# **GENERAL INFORMATION, EQUIPMENT DESCRIPTION AND DATA, AND PRINCIPLES OF OPERATION**

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## GENERAL INFORMATION

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### SCOPE

1. **Type of Manual.** This manual contains operating and maintenance instructions for the 7.62 x 51 mm NATO, G-3 rifle.
2. **Equipment Name and Model Number.** G-3 rifle.
3. **Procedures.** There are different models of the G-3 rifle. Only one model is depicted in this manual, but procedures are common to most models.

### MAINTENANCE FORMS, RECORDS, AND REPORTS

The Marine Corps forms and record procedures used for equipment maintenance will be those prescribed in the current edition of TM 4700-15/1\_, *Ground Equipment Record Procedures*.

### CORROSION PREVENTION AND CONTROL

Corrosion prevention and control (CPC) of weapons material is a continuing concern. While corrosion is typically associated with rusting metal, it can also include the deterioration of other items such as contacts, injection molded plastics, wood, and foam inserts in the case. Unusual cracking, softening, swelling, or breaking of these or other materials may be signs of corrosion.

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**GENERAL INFORMATION - CONTINUED**


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**DESTRUCTION OF MATERIAL TO PREVENT ENEMY USE**

To render the equipment useless to the enemy, U.S. Marine Corps personnel shall destroy the equipment by weapons fire, smashing, disassembly, burning, or other means.

**ABBREVIATION/ACRONYM LIST****Definition**

BZO .....	Battle Sight Zero
CAGEC .....	Commercial and Government Entity Code
CLP .....	Cleaner, Lubricant, and Preservative
fps .....	Feet per Second
in. ....	Inch
Kg .....	Kilogram
LAW .....	Lubricant, Arctic, Weapons
lb .....	Pound
LSA .....	Lubricant, Semi-Fluid, Automatic Weapons
LSA-T .....	Lubricant, Semi-Fluid, Automatic Weapons with Teflon
m .....	Meter
mps .....	Meters per Second
NATO .....	North Atlantic Treaty Organization
NAVMC .....	Navy Marine Corps
NBC .....	Nuclear, Biological, Chemical
NSN .....	National Stock Number
oz .....	Ounce

GENERAL INFORMATION - CONTINUED

ABBREVIATION/ACRONYM LIST - CONTINUED

Definition

PMCS .....	Preventive Maintenance Checks and Services
psi .....	Pounds per Square Inch
RBC .....	Rifle Bore Cleaner
rds/min .....	Rounds per Minute
SF .....	Standard Form
SFL .....	Solid Film Lubricant
SMR .....	Source, Maintenance, and Recoverability
TB .....	Technical Bulletin
TI .....	Technical Instruction
TM .....	Technical Manual
VCI .....	Volatile Corrosion Inhibitor

END OF WORK PACKAGE

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## EQUIPMENT DESCRIPTION AND DATA

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### GENERAL DESCRIPTION

1. The G-3 rifle is a 7.62 mm, lightweight, air-cooled, gas-operated, magazine-fed, shoulder-fired weapon that can be fired in semi-automatic or fully automatic modes.
2. Other features of this weapon include:
  - a. Upper Receiver and Barrel Assembly. Has a fixed, hooded, front sight blade and a rear sight adjustable for both windage and elevation.
  - b. Bolt Carrier Group. Includes locking rollers for timing, locking, and unlocking.
  - c. Magazine Release. Is located under the upper receiver.
  - d. Safety Selector Lever. Selects the SAFE, SEMI, and AUTO modes and prevents the weapon from being cocked when on SAFE.

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**EQUIPMENT DESCRIPTION AND DATA - CONTINUED**

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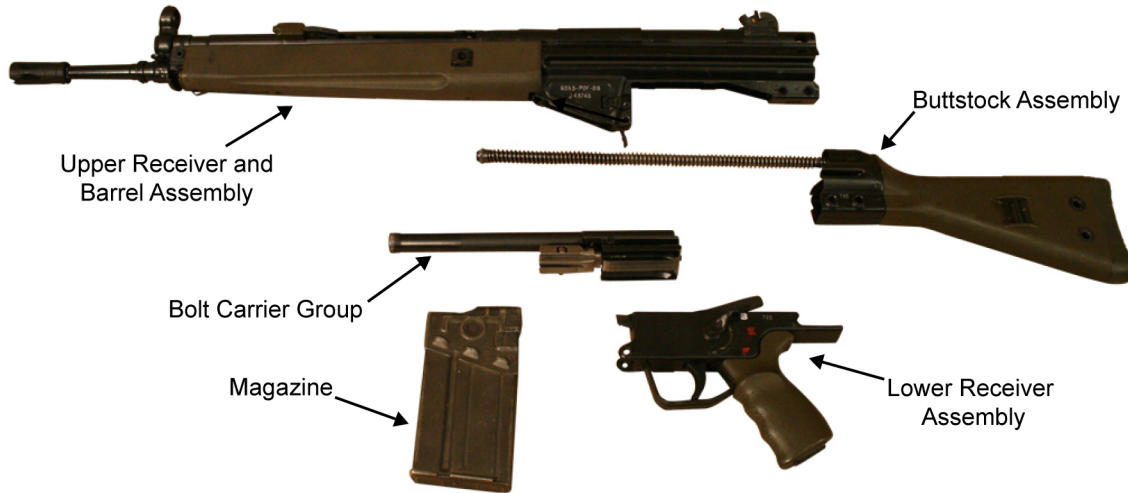
**MAJOR COMPONENTS**

Figure 1. Major Components of the G-3.

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**EQUIPMENT DESCRIPTION AND DATA - CONTINUED**

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**DESCRIPTION OF MAJOR COMPONENTS**

1. **Upper Receiver and Barrel Assembly**. The upper receiver contains the front sight, rear sight assembly, bolt carrier group, and bolt assembly. The barrel is air-cooled and holds the handguard and flash suppressor.
2. **Bolt Carrier Group**. Carries bolt head assembly to chamber and fires the weapon. Contains the firing pin, extractor, and bolt head locking lever.
3. **Buttstock Assembly**. Houses the drive rod spring, buffer, backplate, and contains the buttpad.
4. **Lower Receiver Assembly**. Contains the trigger group, pistol grip, and safety selector lever.
5. **Magazine**. 20-round capacity.

## EQUIPMENT DESCRIPTION AND DATA - CONTINUED

## EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

Table 1. G-3 Rifle Equipment Data.

G-3 Rifle Equipment Data	
Caliber	7.62 x 51 mm NATO (.308 in.)
Total Weight:	
Rifle Empty	9.4 lb (4.3 kg)
Fully Loaded Magazine	1.5 lb (0.7 kg)
Length:	
Rifle with compensator	40.4 in.
Barrel	17.7 in.
Rifling	4 grooves, right hand twist 1 turn in 12 in.
Sights:	
Front	Hooded sight blade
Rear	Adjustable for windage and elevation Open "V" sight
Magazine Capacity	20 rounds

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**EQUIPMENT DESCRIPTION AND DATA - CONTINUED**

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Table 1. G-3 Rifle Equipment Data - Continued.

<b>G-3 Rifle Equipment Data</b>	
Modes of Fire	Semi-automatic Fully automatic
Maximum Effective Range: Individual points/targets Area targets	600-800 m 800-1,100 m
Rate of Fire (cyclic)	500-600 rds/min
Muzzle Velocity	Approx. 2,600 fps

**ASSOCIATED EQUIPMENT**

Refer to the supply system responsibility items (SSRI) list in WP 0017 00 for a list of the associated equipment.

**END OF WORK PACKAGE**

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## PRINCIPLES OF OPERATION

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### SEMI-AUTOMATIC

1. **Cycle of Operation**. The cycle of operation is similar in all small arms. Knowledge of what happens during the cycle of operation will help the operator understand the cause of and remedy for various stoppages.
2. **Eight Steps**. The cycle of operation contains eight steps:
  - a. Feeding
  - b. Chambering
  - c. Locking
  - d. Firing
  - e. Unlocking
  - f. Extracting
  - g. Ejecting
  - h. Cocking

---

## PRINCIPLES OF OPERATION - CONTINUED

---

3. **Description of Eight Steps.** The eight steps that make up the cycle of operation are explained below, along with a brief description of what occurs inside the rifle during each step. Assume that a full magazine is loaded in the weapon and the bolt carrier group is to the rear.
- a. **Feeding.** The force of the recoil spring pushes the bolt forward, toward the barrel extension, stripping a cartridge from the magazine and loading it into the chamber.
  - b. **Chambering.** Chambering is completed when the cartridge is fully seated in the chamber and the extractor is engaged in the extraction groove at the base of the cartridge.
  - c. **Locking.** The weapon relies on a delayed roller-locked bolt system. During chambering the bolt head enters the barrel extension and its forward movement is stopped. The bolt carrier continues forward, pushing the locking piece into the bolt head. The angled shoulders of the locking piece force the locking rollers into the contours of the barrel extension, to lock the weapon. The firing pin is now in position behind the cartridge for firing.
  - d. **Firing.** When the trigger pivots on its axle, the back of the sear rises, causing the front of the sear to lower. This action removes the sear from the notch in the hammer, causing the hammer to pivot on its axle. As a result of spring tension, the hammer is allowed to strike the firing pin and ignite the primer of the cartridge.

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## PRINCIPLES OF OPERATION - CONTINUED

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- e. **Unlocking.** When the cartridge is fired, gas pressure exerts a thrust on the bolt carrier. The bolt carrier carries the bolt to the rear to unseat and compress the locking rollers. The balanced angular ratio of the locking piece and the locking rollers causes a delayed recoil movement of the bolt head, thus guaranteeing that the bolt head keeps the barrel locked until the bullet has left the muzzle. The bolt carrier continues rearward until it contacts the face of the hammer, forcing the hammer to cock and the recoil spring to be compressed.
- f. **Extracting.** With the extractor crimped around the extracting groove on the cartridge case, the rearward movement of the bolt carrier allows the empty cartridge to be removed from the barrel extension during the recoil and compression of the locking rollers.
- g. **Ejecting.** As the bolt carrier recoils to the rear, it rides over the rear of the ejector, raising the front of the ejector into the path of the cartridge case, expelling it from the weapon.
- h. **Cocking.** As the bolt carrier recoils to the rear, it rides over the hammer, forcing it back and down, causing the hammer to engage the sear.

## AUTOMATIC

- 1. **Cycle of Operation.** The cycle of operation is similar to semi-automatic operation, with some minor differences in operation due to differences in internal fire control components. Knowledge of what happens during the cycle of operation will help the operator understand both the cause of and remedy for various stoppages.
- 2. **Eight Steps.** The automatic cycle of operation contains the same fundamental eight steps as the semi-automatic.

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**PRINCIPLES OF OPERATION - CONTINUED**

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3. **Description.** With the safety selector lever in the AUTO position, the weapon will fire repeatedly as long as the trigger is held or until the magazine empties. This is accomplished through the use of a sear that momentarily holds the hammer rearward until the bolt has fed, chambered, and locked on the next round.
- a. The trigger is pulled and held, releasing the hammer, which fires the first round.
  - b. As the bolt moves rearward, the hammer is forced to the rear and is caught by the sear.
  - c. As the bolt returns to the locked position, the sear releases the hammer and the next round is fired.
  - d. The sequence repeats as long as the trigger is held rearward or the magazine empties.
  - e. The cycle of operation will stop when the trigger is released and the hammer is caught by the sear.

**END OF WORK PACKAGE**

## **CHAPTER 2**

# **OPERATOR INSTRUCTIONS**

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**DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS**

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**GENERAL**

This section describes the various controls and provides sufficient information to ensure the proper operation of the 7.62 mm, G-3 rifle.

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**DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS - CONTINUED**

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**OPERATOR CONTROLS AND INDICATORS**

**Right Side View.** Refer to Figure 1.

1. **Magazine**. Contains up to 20 rounds of 7.62 mm ammunition.
2. **Trigger**. When pulled, fires the weapon.
3. **Front Sight**. Consists of a fixed, hooded, front sight blade.
4. **Magazine Release**. Allows the operator to release the magazine for removal from the weapon.

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**DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS - CONTINUED**

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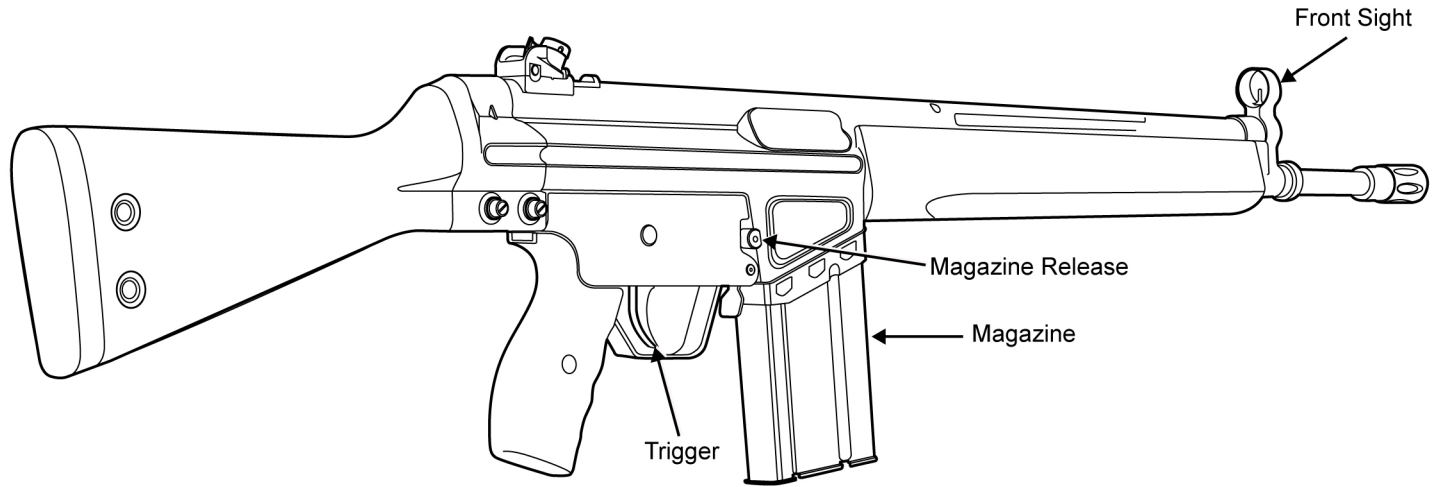


Figure 1. Right Side View of the G-3.

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**DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS - CONTINUED**

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**Left Side View.** Refer to Figure 2.

1. **Flash Suppressor.** Decreases muzzle flash when the weapon is fired.
2. **Charging Handle Assembly.** Provides a means of charging the weapon.
3. **Ambidextrous Magazine Release.** Allows the operator to release the magazine for removal from the weapon.
4. **Rear Sight.** Mechanically adjusts for both windage and elevation with positions 1 through 4 corresponding respectively to range of 100 m to 400 m. Position 1 is an open “V” sight and serves as the auxiliary sight. Position 2 is the basic sight.
5. **Safety Selector Lever.** Allows the operator to select the mode of fire and place the weapon on SAFE.

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**DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS - CONTINUED**

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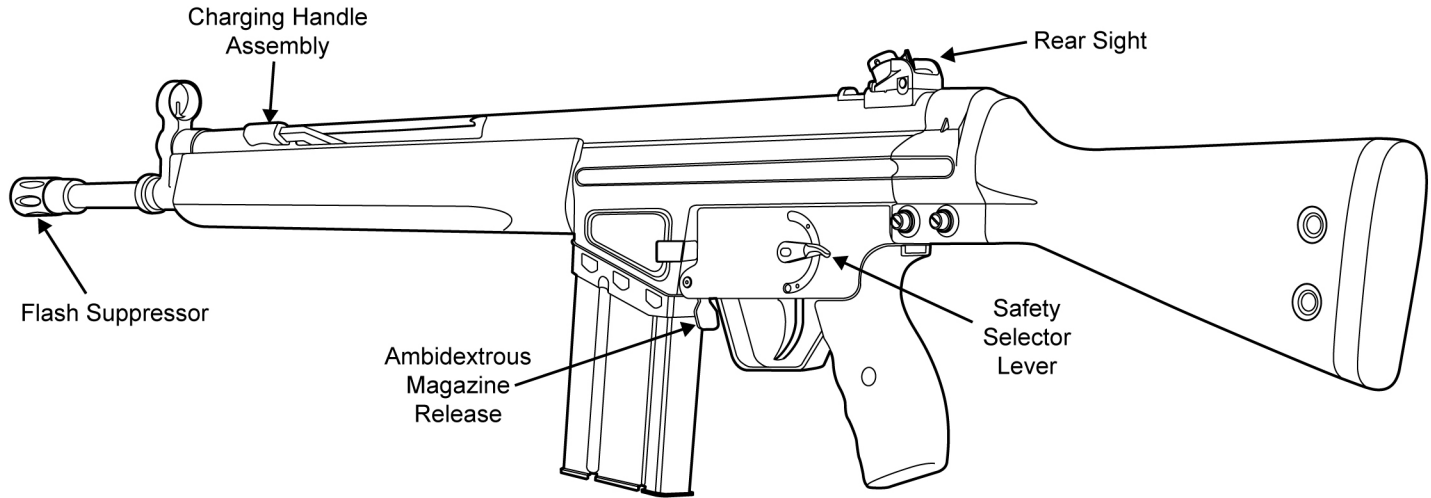


Figure 2. Left Side View of the G-3.

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**DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS - CONTINUED**

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**SAFETY SELECTOR LEVER**

1. **SAFE**. The weapon will not fire. The safety selector lever can be set on SAFE even when the hammer is forward. Refer to Figure 3.



Figure 3. Safety Selector Lever Placed on SAFE.

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**DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS - CONTINUED**

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2. **SEMI**. The weapon will fire one round each time the trigger is pulled. Refer to Figure 4.



Figure 4. Safety Selector Lever Placed on SEMI.

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**DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS - CONTINUED**

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3. **AUTO**. The weapon will continue to fire as long as the trigger is held to the rear or until the magazine is empty. Refer to Figure 5.



Figure 5. Safety Selector Lever Placed on AUTO.

---

**DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS - CONTINUED**

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**REAR SIGHT ASSEMBLY**

1. **Rear Sight Cylinder**. Positions 1 through 4 correspond respectively to ranges of 100 m to 400 m. Position 1 is an open “V” sight. Refer to Figure 6.
2. **Adjustment Screw**. Rotates left and right to compensate for windage. Refer to Figure 6.
3. **Locking Screw**. Tightens down on the adjustment screw. Refer to Figure 6.

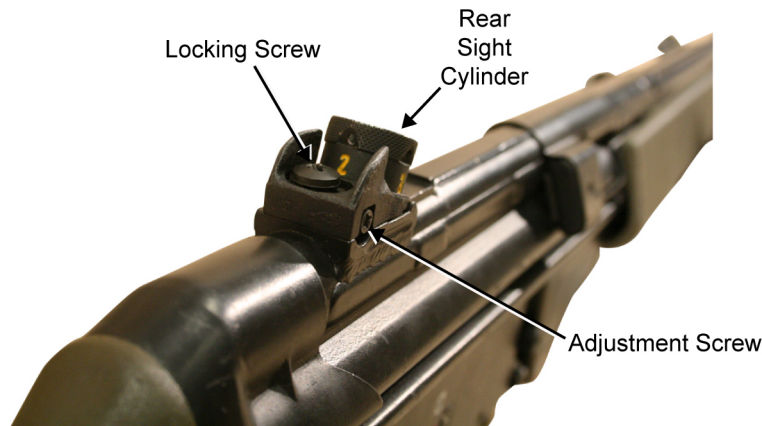


Figure 6. Rear Sight Assembly.

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**DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS - CONTINUED**

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**FRONT SIGHT**

The front sight is a fixed hooded blade held above the upper receiver and barrel assembly by a base. Refer to Figure 7.



Figure 7. Front Sight.

**END OF WORK PACKAGE**

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## OPERATION UNDER USUAL CONDITIONS

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### GENERAL

This section contains instructions for the operation of the 7.62 mm G-3 rifle under conditions of moderate temperature and humidity.

### PREPARATION FOR FIRING

#### WARNING

Check the bore to ensure it is clean and free of obstruction. Failure to follow this warning may result in injury or death to personnel.

1. Ensure the weapon is properly lubricated.
2. Check the weapon for correct assembly and proper operation.
3. Check the ammunition for grade, identification marking, and serviceability.
4. Operate and inspect the controls for satisfactory functioning.

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**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

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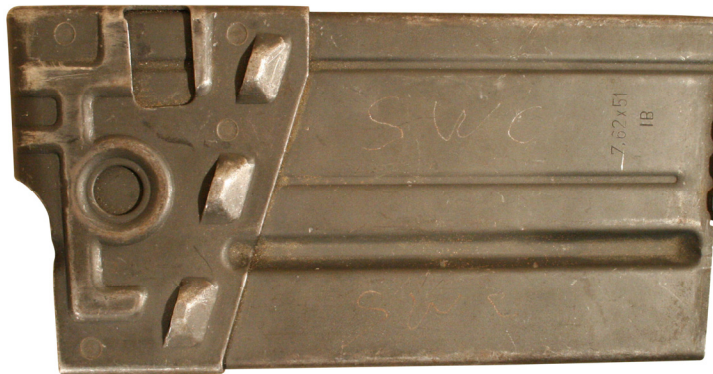
**LOADING A MAGAZINE**

Figure 1. Magazine.

---

**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

**CAUTION**

Ensure ammunition is free of sand, mud, moisture, frost, snow, ice, grease, or other foreign debris. Also, check the ammunition for dents in the cartridges or bad primers.

To load ammunition into a magazine, follow these instructions:

1. Hold the magazine in one hand with the follower facing up.
2. With the opposite hand, insert the rounds into the feed mechanism of the magazine.
3. Ensure the rounds are seated against the rear of the magazine.

**LOADING THE WEAPON****WARNING**

If the weapon is dropped or jarred with a loaded magazine in place, it could chamber a round. Failure to follow this warning may result in injury or death to personnel.

---

**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

**NOTE**

The magazine may be loaded into the weapon with the bolt assembly open or closed. The procedure listed below is for the bolt open.

1. Place the safety selector lever in the SAFE position. Point the muzzle in a safe direction.
2. Pull the charging handle rearward to open the bolt and lock it to the rear.
3. Check the chamber to ensure it is clear.
4. Insert a loaded magazine into the magazine well, pushing upward until the magazine locks into the weapon.
5. Tap upward on the magazine to ensure it is properly seated.

**UNLOADING AND CLEARING THE WEAPON**

1. Point the weapon in a safe direction, keeping fingers outside of the trigger guard.

---

**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

2. Put the safety selector lever in the SAFE position. Refer to Figure 2.



Figure 2. Place the Safety Selector Lever on SAFE.

---

**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

3. Remove the magazine from the weapon.
4. Pull the charging handle to the rear and rotate into the slot, locking the bolt carrier in place. Refer to Figure 3.

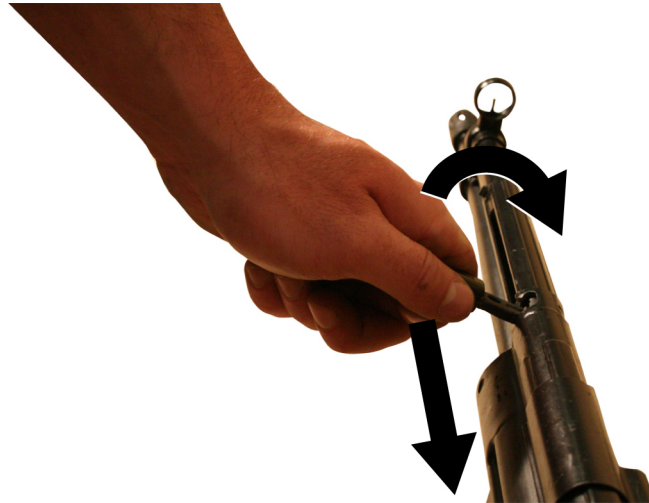


Figure 3. Pull the Charging Handle to the Rear.

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**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

5. Physically and visually inspect the chamber; it should be empty.
6. Allow the charging handle to go fully forward.

**ZEROING THE WEAPON****NOTE**

Zeroing requires assistance from an armorer due to special tool requirements.

1. Short-range zeroing allows battle sight zero (BZO) to be confirmed before firing at longer ranges (0-500 m).
2. The operator should learn and understand the following three important terms before zeroing:
  - a. Sight line is an imaginary straight line starting at the operator's eye, running through the sighting system and down range to the target.
  - b. Trajectory line is the path of the projectile as it travels to the target. The line of trajectory is a downward curving path, and is always affected by gravity and often wind.
  - c. Bore line is an imaginary straight line running through the center of the weapon's barrel.

---

**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

3. When properly zeroed for longer ranges, the G-3 sighting systems' bore line and the fired projectile angle upward overcoming the effects of gravity. Most G-3 sighting systems are oriented several inches above the bore line. The curved trajectory line (projectile path) cuts through the sight line (or intersects it), in two locations.
4. The first intersection of sight line and projectile trajectory is at short range and is a convenient location for short range zeroing. The second intersection is the desired BZO range (point of aim/point of impact at 300 m). Between the two intersections, the trajectory line is above the sight line. If the distances above the sight line are known at specific ranges, i.e., 100 or 200 m, this data can be used to verify a longer range zero. If possible, verify BZO at the actual ranges required.

**NOTE**

Detailed zeroing procedures will be covered in a separate period of instruction. This section will describe how to set the front and rear sight to adjust the strike of the round.

A rule of thumb for adjusting the rear sight cylinder and windage adjustment screw is to move the screw or drum in the OPPOSITE direction of the desired adjustment of the strike of the round.

5. Sight in the G-3 rifle with the rear sight in position 2 at a range of 100 m.

---

**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

6. Adjust elevation as follows:
- a. Assemble the rear sight adjustment tool, as shown in Figure 4.



Figure 4. Rear Sight Adjustment Tool Assembled.

- b. Insert the rear sight adjustment tool into the rear sight cylinder and engage the ears of the tool with the notches in the sight.

**NOTE**

Turning the rear sight cylinder one notch will move the point of impact 1.29 in. up or down at a range of 100 m.

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**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

- c. Turn the rear sight cylinder clockwise to lower the point of impact. Turn the rear sight cylinder counterclockwise to raise the point of impact. Refer to Figure 5.



Figure 5. Adjust the Rear Sight Cylinder.

---

**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

7. Adjust windage as follows:
  - a. Loosen the locking screw on top of the sight base. Refer to Figure 6.



Figure 6. Loosen the Locking Screw.

---

**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

**NOTE**

Each revolution of the adjustment screw moves the point of impact 5.19 in. to the left or right at a range of 100 m.

- b. Turn the adjustment screw clockwise to move the point of impact to the right. Turn the adjustment screw counterclockwise to move the point of impact to the left. Refer to Figure 7.



Figure 7. Locking Screw and Adjustment Screw.

---

**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

**FIELD FIRING TECHNIQUES**

1. Establish BZO. Refer to *Zeroing the Weapon* in this work package.
2. Rotate the rear sight cylinder until the number (1, 2, 3, or 4) corresponding to the desired shooting distance is selected.
3. Obtain a good sight picture and good sight alignment with the rear sight aperture and the front sight blade.
4. Squeeze the trigger and fire.

---

**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

**FAILURE TO FIRE****WARNING**

If a noticeable difference in sound or recoil of the weapon is experienced, stop firing. Either condition could indicate an incomplete powder burn and/or a projectile lodged in the bore.

If the weapon stops firing with a live round in the chamber of a hot barrel, remove the round immediately. If the round cannot be removed within 10 seconds, wait 15 minutes with the weapon pointed in a safe direction. This will avoid possible injury to personnel from cook-off of the chambered round. Keep the face away from the ejection port while clearing a hot chamber. Failure to follow these warnings may result in injury or death to personnel.

---

**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

1. **Immediate Action.**
  - a. Slap upward on the magazine to ensure it is properly seated.
  - b. Pull the charging handle rearward.
  - c. Observe the chamber for rounds and debris.
  - d. Release the charging handle to strip a round from the magazine.
  - e. Shoot the weapon.
2. **Refer to Armorer.** If immediate action (step 1) has been applied and weapon fails to fire, see the armorer.
3. **Remedial Action.**
  - a. Use the following steps to clear a cartridge case stuck in the chamber:

---

**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

- (1) Place the safety selector lever on SAFE. Refer to Figure 8.



Figure 8. Place the Safety Selector Lever on SAFE.

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**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

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- (2) Pull the charging handle to the rear and rotate into the slot, locking the bolt carrier in place. Refer to Figure 9.

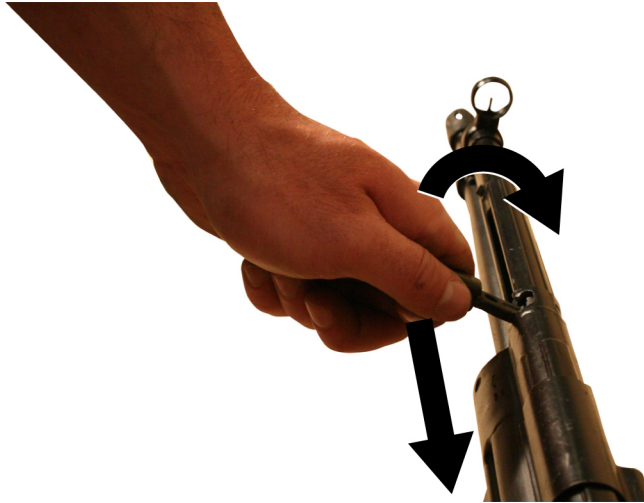


Figure 9. Pull the Charging Handle to the Rear.

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**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

- (3) Remove the magazine.
- (4) Insert a cleaning rod into the barrel from the muzzle end and tap out the cartridge case.

**WARNING**

Immediately cease fire if an audible popping sound or reduced recoil is experienced during firing. DO NOT apply immediate action. DO NOT attempt to remove a projectile that is lodged in the barrel. Evacuate to a higher echelon maintenance. Failure to follow these warnings may result in injury or death to personnel.

- b. Use the following steps if projectile is lodged in the barrel:
  - (1) Retract the bolt slowly and remove the spent cartridge case.
  - (2) Clear the weapon and check for unburned powder grains in the receiver or bore and for a projectile lodged in the bore.
  - (3) Remove unburned powder from the bore before resuming fire.
  - (4) If a projectile is lodged in the bore, evacuate the weapon to higher level maintenance.

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## OPERATION UNDER USUAL CONDITIONS - CONTINUED

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### AMMUNITION

Only approved 7.62 mm ammunition should be used in the G-3 rifle.

### USING TRACER AMMUNITION

Use tracer ammunition to help hit targets during hours of darkness or low light levels. Tracer ammunition is not as effective as ball ammunition against most targets. Mix tracer ammunition with ball ammunition in magazine when available.

### CHANGING MAGAZINES

In combat, insert a fully loaded magazine before the one being used is completely empty (if possible).

### CARE, HANDLING, AND PRESERVATION

1. **Packing.** Ammunition is packed to withstand conditions ordinarily encountered in the field. Care must be exercised to keep packing from becoming broken or otherwise damaged. All broken packing must be repaired immediately and all markings must be transferred to the new parts. Ammunition may be packed in metal-lined wooden boxes or metal boxes. Damaged boxes containing metal liners should be air-tested and sealed if equipment for this work is available.
2. **Storing in the Open.** When it is necessary to leave ammunition in the open, raise it at least 6 inches from the ground and cover it with tarpaulins. Whenever possible, use wood between each row to permit full air circulation. Dig suitable trenches to prevent water from running under the stack. Arrange tarpaulins to permit air circulation through the stack, keeping the tarps at least 6 inches from the top, ends, and sides of the stack.

---

**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

**3. Moisture and High Temperature.****WARNING**

Store ammunition under protective cover and away from excessive heat and extreme temperatures. Failure to follow this warning may result in injury or death to personnel.

- a. Keep boxes closed until ammunition is needed. Ammunition removed from airtight containers, particularly in damp climates, can corrode and become unserviceable.
- b. Protect ammunition from high temperatures and prolonged exposure to direct sun rays. Such exposure is likely to affect the ballistic performance of the cartridges. The combination of high temperature and humidity can destabilize propellant and tracer mixture in tracer ammunition.

**WARNING**

DO NOT attempt to disassemble a cartridge or any of its components. DO NOT polish brass components of cartridges. Failure to follow this warning may result in injury or death to personnel.

**CAUTION**

The use of oil or grease on cartridges is prohibited.

---

**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

**4. General Care.**

- a. Protect ammunition from sand, mud, moisture, frost, snow, ice, grease, and other foreign matter. Wipe off wet or dirty ammunition immediately with a clean, dry cloth. If corrosion forms on cartridges, wipe it off with a clean, dry cloth.
- b. Brass cartridge cases are easily dented. Protect them from damage.
- c. Protect a partially used box of ammunition from unauthorized use by firmly fastening the box cover in place.

**PRECAUTIONS IN FIRING****WARNING**

Use only authorized ammunition manufactured to U.S. or NATO specifications.

DO NOT fire seriously corroded ammunition, dented cartridges, cartridges with loose projectiles, cartridges exposed to extreme heat (135°F) until cooled, or cartridges with the projectile pushed in (short rounds).

Failure to follow these warnings may result in injury or death to personnel.

---

**OPERATION UNDER USUAL CONDITIONS - CONTINUED**

---

**CAUTION**

DO NOT remove the flash suppressor for any reason. Armorers are not authorized to remove it for cleaning purposes.

**END OF WORK PACKAGE**

---

## OPERATION UNDER UNUSUAL CONDITIONS

---

### EXTREME COLD CLIMATE - ARCTIC

Cleaning and lubrication should be done inside a warm room. The weapon should be at room temperature if possible.

1. Apply a light coat of Lubricant, Arctic, Weapons (LAW) to all functional parts.
2. To prevent condensation and freezing, allow gradual cooling by keeping the weapon covered when moving from a warm area to a cold area.
3. Always attempt to keep the weapon dry.
4. Unload and hand function the weapon every 30 minutes to prevent freezing of functional parts.
5. Do not lay a warm weapon directly in snow or ice.
6. When moving a cold weapon into a warm area, condensation will form in and on the weapon. If possible, leave the weapon in a protected, cold area outside. When the weapon is brought into a warm area, as it reaches room temperature, it should be disassembled and wiped dry several times.
7. Ensure the insides of the magazines and ammunition are wiped dry. Moisture can freeze and cause malfunctions. Do not lubricate ammunition.

---

**OPERATION UNDER UNUSUAL CONDITIONS - CONTINUED**

---

8. The use of a muzzle cap, a protective magazine bag, and an overall weapon cover will help protect the weapon. Use the items whenever the tactical situation permits.
9. For extended operations in extreme cold, have the unit armorer remove the trigger guard.

**HOT, WET CLIMATE - JUNGLE**

Use Cleaner, Lubricant, and Preservative (CLP) to clean and lubricate the weapon.

1. Perform normal maintenance as outlined in *Preventive Maintenance Checks and Services (PMCS), Including Lubrication Instructions* (WP 0011 00).
2. Clean and lubricate weapon more frequently. Inspect hidden surfaces of the bolt and bolt carrier assembly, upper receiver and chamber/barrel, and the lower receiver and trigger assembly for corrosion.
3. To help prevent corrosion, remove hand prints with a dry wiping rag. Lubricate lightly with CLP.
4. Unload and check the insides of magazines frequently for corrosion and moisture. Wipe ammunition dry before reloading.
5. Use a magazine bag and muzzle cap for protection when the tactical situation permits.

---

**OPERATION UNDER UNUSUAL CONDITIONS - CONTINUED**

---

**HOT, DRY CLIMATE - DESERT**

Use CLP to clean and lubricate the weapon.

**CAUTION**

Areas with hot, dry climates usually contain blowing sand and fine dust. Deserts can be hot during daylight hours and freezing during hours of darkness. This will severely tax the weapon as well as other types of equipment. The weapon's continued operation will depend on strictly and routinely following detailed cleaning and lubricating procedures.

1. Dust and sand will get into the weapon and magazines causing malfunctions. Perform a thorough cleaning of the weapon daily and after all firing missions.

**NOTE**

Always shake CLP prior to use.

2. Corrosion is less likely to form on metal parts in a dry climate. Therefore, lubrication should only be applied to internal working surfaces and functioning parts. Use normal amounts of CLP for lubrication. Unload the magazine, dry the inside of magazines, and wipe down ammunition daily. DO NOT lubricate magazines.
3. The use of an overall weapon protection cover, muzzle cap, and spare magazine protective bags will help protect the weapon and ammunition from sand and dust. Use these items when the tactical situation permits.

---

**OPERATION UNDER UNUSUAL CONDITIONS - CONTINUED**

---

4. At all times, as a minimum effort to help keep out sand and dust, keep the bolt closed, a magazine installed in the weapon, and a muzzle cap on the muzzle.

**NOTE**

Removal of the muzzle cap is recommended prior to firing. Retain the muzzle cap for future use. Firing the weapon with the muzzle cap installed poses no danger to the weapon or operator.

**HEAVY RAIN AND FORDING OPERATIONS - ALL CLIMATES**

1. Perform maintenance in accordance with climate conditions.
2. Always attempt to keep weapon dry.
3. Use a weapon cover, muzzle cap, and protective bags to protect the weapon, magazines, and ammunition.

**WARNING**

DO NOT fire the weapon if water is present in the barrel. Failure to follow this warning may result in injury or death to personnel.

4. Always drain any water from the barrel prior to firing. Dry the bore with a clean swab.

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**OPERATION UNDER UNUSUAL CONDITIONS - CONTINUED**

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**NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC)**

General procedures can be found in Marine Corps Warfighting Publications (MCWP) 3-37.2A\_ and MCWP 3-37.3\_, *NBC Decontamination*.

**END OF WORK PACKAGE**

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# **CHAPTER 3**

## **TROUBLESHOOTING**

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## TROUBLESHOOTING INTRODUCTION

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### GENERAL

This chapter contains troubleshooting information for locating and correcting malfunctions that may develop with the G-3 rifle. The *Troubleshooting Symptom Index* (WP 0008 00) will serve as a quick reference to aid in troubleshooting the weapon. Table 1, in WP 0009 00, is a guide for troubleshooting. Perform the tests, inspections, and corrective actions in the order shown in the table. The table does not cover all possible malfunctions; it includes only the more common malfunctions. If the weapon malfunction is not listed or actions listed do not correct the fault, notify the unit armorer.

### END OF WORK PACKAGE

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**TROUBLESHOOTING SYMPTOM INDEX**


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<b><u>Malfunction/Symptom</u></b>	<b><u>Troubleshooting Procedure Page</u></b>
1. Weapon Will Not Fire.....	0009 00-1
2. Bolt Will Not Unlock.....	0009 00-1
3. Failure to Extract .....	0009 00-2
4. Failure to Eject.....	0009 00-2
5. Failure to Feed .....	0009 00-3
6. Double Feed.....	0009 00-3
7. Failure to Chamber .....	0009 00-3
8. Bolt Fails to Lock .....	0009 00-4
9. Short Recoil .....	0009 00-4
10. Bolt Carrier “Hung Up” .....	0009 00-5
11. Safety Selector Lever Binds.....	0009 00-6
12. Handguard Takedown Pin Fails to Secure Handguard .....	0009 00-6

**END OF WORK PACKAGE**

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## TROUBLESHOOTING PROCEDURES

Table 1. Troubleshooting Procedures.

Malfunction/Symptom	Probable Cause	Corrective Action
1. Weapon Will Not Fire.	a. Safety selector lever on SAFE. b. Magazine not properly seated. c. Magazine damaged. d. Light indentation on cartridge primer. e. Excessive Cleaner, Lubricant, and Preservative (CLP) in firing pin recess. f. Defective ammunition. g. Excessive carbon on firing pin or in firing pin recess.	Place safety selector lever on SEMI or AUTO.  Reseat magazine.  Replace magazine.  Notify unit armorer.  Clean firing pin recess with pipe cleaner. Refer to WP 0013 00.  Remove and discard ammunition.  Clean firing pin and/or firing pin recess. Refer to WP 0013 00.
2. Bolt Will Not Unlock.	Dirty or burred bolt head or locking recesses in the upper receiver.	Notify unit armorer.

---

**TROUBLESHOOTING PROCEDURES - CONTINUED**


---

Table 1. Troubleshooting Procedures - Continued.

<b>Malfunction/Symptom</b>	<b>Probable Cause</b>	<b>Corrective Action</b>
3. Failure to Extract.	a. Broken extractor spring.	Notify unit armorer.
	b. Dirty or corroded ammunition.	Remove magazine. Push out jammed cartridge with a cleaning rod.
	c. Carbon in chamber.	Clean chamber. Refer to WP 0013 00.
	d. Restricted movement of bolt carrier assembly.	Remove, clean, and lubricate bolt carrier assembly. Refer to WP 0013 00.
	e. Fouling or carbon in extractor recess or lip.	Notify unit armorer.
	f. Frozen extractor.	Notify unit armorer.
4. Failure to Eject.	a. Defective ejector.	Notify unit armorer.
	b. Broken or damaged ejector spring.	Notify unit armorer.

---

**TROUBLESHOOTING PROCEDURES - CONTINUED**

---

Table 1. Troubleshooting Procedures - Continued.

<b>Malfunction/Symptom</b>	<b>Probable Cause</b>	<b>Corrective Action</b>
5. Failure to Feed.	a. Magazine not inserted properly. b. Dirty or corroded ammunition. c. Dirty magazine. d. Defective magazine. e. Too many rounds loaded into magazine.	Insert magazine properly. Clean or replace ammunition. Clean magazine. Refer to WP 0013 00. Replace magazine. Remove excess cartridges.
6. Double Feed.	Defective magazine.	Replace magazine.
7. Failure to Chamber.	a. Dirty or corroded ammunition. b. Damaged ammunition. c. Carbon in chamber or on gas tube.	Clean or replace ammunition. Replace ammunition. Clean chamber. Refer to WP 0013 00.

---

**TROUBLESHOOTING PROCEDURES - CONTINUED**


---

Table 1. Troubleshooting Procedures - Continued.

<b>Malfunction/Symptom</b>	<b>Probable Cause</b>	<b>Corrective Action</b>
8. Bolt Fails to Lock.	a. Dirt, corrosion, or carbon build-up in barrel locking lugs. b. Carbon in chamber. c. Barrel extension fouled. d. Dirty or corroded ammunition. e. Recoil spring worn out. f. Magazine not inserted properly. g. Magazine fouled or deformed.	Clean lugs. Refer to WP 0013 00.  Clean chamber. Refer to WP 0013 00. Clean barrel extension. Clean or replace ammunition. Notify unit armorer. Remove magazine and reinsert properly. Replace magazine.
9. Short Recoil.	a. Unserviceable inspection cap. b. Dirty bolt carrier.	Notify unit armorer.  Clean bolt carrier. Refer to WP 0013 00.

---

**TROUBLESHOOTING PROCEDURES - CONTINUED**


---

Table 1. Troubleshooting Procedures - Continued.

<b>Malfunction/Symptom</b>	<b>Probable Cause</b>	<b>Corrective Action</b>
10. Bolt Carrier "Hung Up."	<p>Round jammed between bolt head and chamber and/or double feed.</p> <p><b>WARNING</b></p> <p>Keep clear of the muzzle. Failure to follow this warning may result in injury or death to personnel.</p> <p><b><u>CAUTION</u></b></p> <p>After the round is removed, the bolt is under tension.</p> <p><b>NOTE</b></p> <p>If this procedure fails, use a cleaning rod to push the bolt fully to the rear through the ejection port.</p>	<p>a. Remove magazine.</p> <p>b. Pull bolt to the rear.</p> <p>c. While bolt is held to the rear, round should fall through magazine well.</p>

---

**TROUBLESHOOTING PROCEDURES - CONTINUED**

---

Table 1. Troubleshooting Procedures - Continued.

<b>Malfunction/Symptom</b>	<b>Probable Cause</b>	<b>Corrective Action</b>
11. Safety Selector Lever Binds.	a. Lack of lubrication. b. Dirt and/or sand under trigger.	Lubricate with CLP.  Clean trigger and/or trigger guard. Refer to WP 0013 00.
12. Handguard Takedown Pin Fails to Secure Handguard.	a. Tightness of retaining clip. b. Cracks or missing parts. c. Unserviceable handguard retaining pin.	Notify unit armorer.  Notify unit armorer.  Notify unit armorer.

**END OF WORK PACKAGE**

## **CHAPTER 4**

# **MAINTENANCE INSTRUCTIONS**

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**SERVICE UPON RECEIPT**

---

**INSPECTING THE WEAPON****WARNING**

Confirm the weapon is unloaded and on SAFE before performing the following procedures. Failure to follow this warning may cause injury or death to personnel.

Inspect all assemblies for missing, broken, or loose parts. Refer to Table 1 in this work package. Inspect for cracks, dents, burrs, excessive wear, rust, or corrosion. Ensure all items are cleaned and lubricated. If defects in this work package are noted, bring them to the attention of the unit armorer. The unit armorer will determine if a defect exists.

---

**SERVICE UPON RECEIPT - CONTINUED**

---

Table 1. Points of Inspection.

<b>Item Inspected</b>	<b>Procedure/Condition</b>
Lower Receiver Assembly	Check the entire assembly for damage, corrosion, and overall finish. The magazine release and safety selector lever should move freely without binding. The safety selector lever must provide a positive “click” when in each firing-mode position.
Buttstock Assembly	The buttstock and pistol grip should be secure and free of cracks and damage.
Rear Sight Assembly	Tight and secure. Free of damage. Windage and elevation adjustments move with effort and click into position.
Front Sight Blade	Not bent or damaged.
Magazine Assembly	Check for dents, spring tension, and serviceability of the follower. Check for correct position of the cartridges in the magazine. Ensure the magazine fits and releases properly.
Charging Handle	Ensure the handle moves freely forward and rearward when charging the weapon, and is not bent.
Bolt Carrier Group	Cycle the bolt carrier and bolt assembly back and forth, feeling for any roughness, which may indicate wear, corrosion, or dirt in receiver. Check the firing pin for chipping or damage. Check the extractor for chips or wear.

---

**SERVICE UPON RECEIPT - CONTINUED**

---

Table 1. Points of Inspection - Continued.

Item Inspected	Procedure/Condition
Upper Receiver and Barrel Assembly	Check the entire assembly for damage, corrosion, and the overall finish. Check the front sight base, and flash suppressor for damage or looseness. Check the handguard for damage or looseness.
Trigger Group	Trigger moves smoothly without binding in all fire modes EXCEPT SAFE. Check the ejector for spring tension and chips or breaks.

**END OF WORK PACKAGE**

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**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS**

---

The shooter will perform Preventive Maintenance Checks and Services (PMCS) before and after firing a 7.62 mm, G-3 rifle.

1. **General.** To ensure the readiness of the weapon, perform preventive maintenance procedures prior to each mission in accordance with Table 1 in this work package. Preventive maintenance procedures include inspection, cleaning, and performance of the checkout procedures.
2. **Explanation of PMCS Table Columns and Entries.**
  - a. **Item Number.** Numbers in this column act as references. When completing an Equipment Inspection and Maintenance Worksheet, include the item number for the check/service item. Item numbers appear in the order in which checks and services are to be performed.
  - b. **Interval.** This column lists when the procedures stated in the procedure column must be performed.

BEFORE procedures must be performed prior to operating the equipment for its intended mission.

DURING procedures must be performed while operating the equipment for its intended mission.

AFTER procedures must be performed immediately following the operation of the equipment.

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**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS -  
CONTINUED**

---

- c. **Item to Check/Service**. This column lists the items and locations to be checked or serviced.
  - d. **Procedure**. This column contains a brief description of PMCS procedures to be performed. The procedure must follow the time stated in the interval column.
  - e. **Not Fully Mission Capable If**. This column states which faults will prevent the weapon from being capable of performing its primary mission. The weapon should not be used if it meets any of the faults listed in this column. Follow standard operating procedures for correcting or reporting weapon failure.
3. **Other Table Entries**. Observe all WARNINGS, CAUTIONs, and NOTES.

**WARNING**

Confirm the weapon is unloaded, clear, and on SAFE before performing the following procedures. Do not keep live ammunition near the work area. Failure to follow these warnings may cause injury or death to personnel.

---

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS -  
CONTINUED**

---

Table 1. Preventive Maintenance Checks and Services (PCMS).

(1) Item No.	(2) Interval	(3) Item to Check/Service	(4) Procedure	(5) Not Fully Mission Capable If:
1	Before	Visual Inspection of Weapon	Check weapon for missing or damaged parts. Report missing or damaged parts to armorer.	Parts are missing or damaged to the point of being unserviceable.
2	During	Periodic Inspection of Weapon	Periodically inspect weapon to ensure it is clean and there is no foreign material in bore. If foreign material is present in bore, clean bore.	Foreign material is in bore.
3	Before and After	Magazine	a. Magazine slips easily into magazine well and locks into place.  b. Magazine follower has spring tension and moves easily inside magazine.	Magazine is distorted or hard to seat in magazine well.  Magazine follower is stuck or has weak spring tension.

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**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS -  
CONTINUED**

---

Table 1. Preventive Maintenance Checks and Services (PCMS) – Continued.

(1) Item No.	(2) Interval	(3) Item to Check/Service	(4) Procedure	(5) Not Fully Mission Capable If:
4	Before and After	Upper Receiver - Barrel	Check for barrel looseness (using hand pressure only).	Barrel is loose enough to be moved by hand.
5	Before and After	Upper Receiver - Handguard	Check for tightness of retaining clip. Check for cracks or missing parts.	Handguard takedown pin fails to secure handguard.
6	Before and After	Upper Receiver - Flash Suppressor	Check for looseness.	Flash suppressor is loose.
7	Before and After	Lower Receiver - Magazine Release	Check magazine release for spring tension and retention of magazine.	Magazine release has no spring tension or does not retain or release magazine.
8	Before and After	Buttstock Assembly	Check for cracks, looseness, and missing parts.	Buttstock is loose.

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**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS -  
CONTINUED**

---

Table 1. Preventive Maintenance Checks and Services (PCMS) – Continued.

<b>(1) Item No.</b>	<b>(2) Interval</b>	<b>(3) Item to Check/Service</b>	<b>(4) Procedure</b>	<b>(5) Not Fully Mission Capable If:</b>
9	Before and After	Weapon Sights (Zero Adjustment)	Move rear sight to ensure it can be adjusted. Return sight to zero setting on weapon.	Sights are damaged, missing, or cannot be adjusted.
10	Before and After	Maintenance Performed During Firing Operations	Clean and lubricate weapon after firing approximately 200 rounds of ammunition or at end of day. Refer to WP 0013 00.	
11	After	Maintenance of Weapon and Equipment	a. Disassemble weapon. Refer to WP 0014 00.  b. Clean and lubricate weapon. Refer to WP 0013 00.  c. Disassemble, inspect, and clean magazine. Refer to WP 0013 00.	

---

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS -  
CONTINUED**

---

Table 1. Preventive Maintenance Checks and Services (PCMS) – Continued.

(1) Item No.	(2) Interval	(3) Item to Check/Service	(4) Procedure	(5) Not Fully Mission Capable If:
11 Cont.	After	Maintenance of Weapon and Equipment	d. Clean and lubricate bayonet and scabbard.  e. Report all missing or damaged parts to unit armorer.	If parts are missing or damaged.
12	Before and After  Function Check	Charging Handle and Safety Selector Lever: - SAFE	a. Place safety selector lever on SAFE.  b. Pull charging handle to the rear. Check that the chamber is clear. Allow charging handle to snap forward.  c. Leave hammer in cocked position.	

---

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS -  
CONTINUED**

---

Table 1. Preventive Maintenance Checks and Services (PCMS) – Continued.

(1) Item No.	(2) Interval	(3) Item to Check/Service	(4) Procedure	(5) Not Fully Mission Capable If:
12 Cont.	Before and After  Function Check	Safety Selector Lever: - SAFE  Safety Selector Lever: - SEMI	d. Pull trigger. Hammer should not fall.  a. Place safety selector lever on SEMI.  b. Pull trigger.	Hammer falls.          Hammer does not fall.

---

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS -  
CONTINUED**

---

Table 1. Preventive Maintenance Checks and Services (PCMS) – Continued.

(1) Item No.	(2) Interval	(3) Item to Check/Service	(4) Procedure	(5) Not Fully Mission Capable If:
12 Cont.	Before and After  Functional Check	Safety Selector Lever: - SEMI	<p align="center"><b>NOTE</b></p> <p>For the purpose of the following test, SLOW is defined as 1/4 to 1/2 the normal rate of trigger release.</p> <p>DO NOT milk the trigger; milking trigger can cause the hammer to fall.</p> <p>c. Hold trigger to rear, charge weapon, and release trigger with a SLOW, smooth motion, without hesitations or stops, until trigger is fully forward (an audible click should be heard). Hammer should not fall. (Hammer should not fall until trigger is pulled.)</p>	Hammer falls.

---

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS -  
CONTINUED**

---

Table 1. Preventive Maintenance Checks and Services (PCMS) – Continued.

(1) Item No.	(2) Interval	(3) Item to Check/Service	(4) Procedure	(5) Not Fully Mission Capable If:
12 Cont.	Before and After  Functional Check	Safety Selector Lever: - SEMI  Safety Selector Lever: - AUTO	d. Repeat above SEMI position test five times.  a. Place safety selector lever on AUTO. Charge weapon and squeeze trigger. Hammer should fall.	The weapon malfunctions during any of these five tests.  Hammer does not fall.



---

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS -  
CONTINUED**

---

**LUBRICATION**

1. **Inspect Before Lubrication.** If items are found to be unsatisfactory during inspection, notify the unit armorer.

**WARNING**

Do not interchange bolt heads between weapons. Failure to follow this warning may cause injury or death to personnel.

- a. **Bolt Head.** Inspect for cracks or fractures. Bolts containing pits extending into the firing pin hole need to be replaced.
- b. **Firing Pin.** Inspect for bent, cracked, blunted, or sharp end.
- c. **Extractor and Extractor Spring.** Inspect extractor for chipped or broken edges in the area of the lip that engages the cartridge rim.

---

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS -  
CONTINUED**

---

**2. Cleaner, Lubricant, and Preservative (CLP).**

a. CLP performs the following:

- (1) Dissolves firing residue and carbon.
- (2) Provides a layer of teflon for lubrication of parts.
- (3) Prevents rust from forming.

**CAUTION**

Do not dry clean the weapon. Do not use hot water or other solvents to clean the weapon.  
This will remove the teflon lubricant built up as a result of using CLP.

b. Use CLP as follows:

- (1) Shake the bottle well before each use.
- (2) Place a few drops on a patch or rag.

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**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS -  
CONTINUED**

---

- (3) Clean the weapon with patches or rags until no residue is found.
- (4) Use another patch or rag to apply a fresh, light coat.
- 3. **Lubrication.** CLP is the lubricant to be used under all but the coldest arctic conditions when Lubricant, Arctic, Weapons (LAW) is used. Remove excessive lubricant from the bore and chamber before firing. For a lubricant guide, refer to Figure 1.

**NOTE**

Dry cleaning solvents may be used to remove lubricants completely. When moving to extreme cold weather operations, remove traces of CLP before applying LAW.

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**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS -  
CONTINUED**

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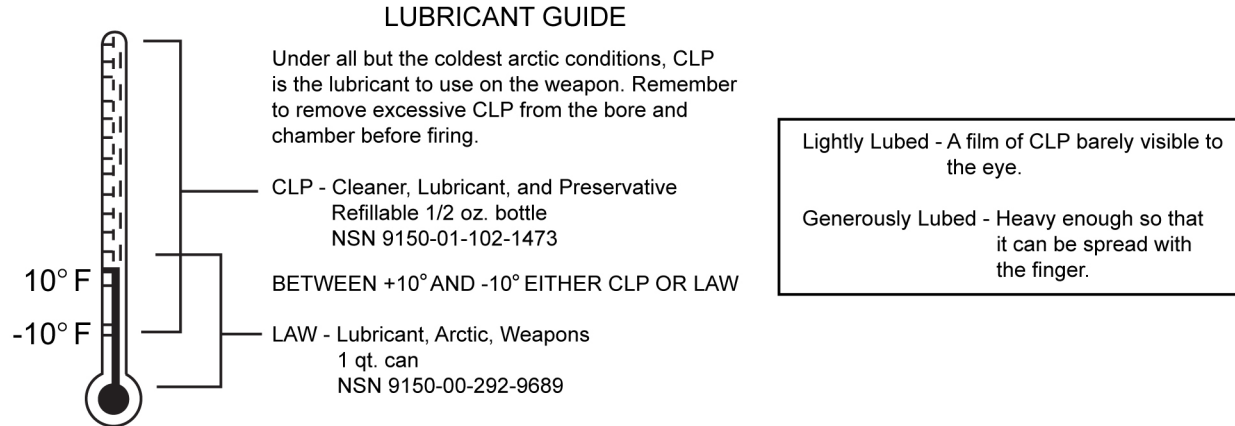


Figure 1. Lubrication Guide.

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**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS -  
CONTINUED**

---

a. **Upper Receiver and Barrel Assembly.**

- (1) Lightly lubricate the inside of the upper receiver, bore and chamber, outer surfaces of barrel and front sight, and surfaces under the handguard.
- (2) Apply one drop of CLP to the charging handle and charging handle spring.

b. **Bolt Carrier Group.**

**CAUTION**

Apply ONLY a light coat of CLP to the firing pin and firing pin recess in the bolt carrier.

- (1) Lightly lubricate the firing pin and firing pin recess in the bolt carrier.
- (2) Apply a light coat to the extractor and extractor spring.
- (3) Lightly lubricate the charging handle.

---

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS -  
CONTINUED**

---

c. **Lower Receiver Assembly.**

- (1) Generously lubricate takedown pins, pivot pins, and detents.
- (2) Lightly lubricate all moving parts and pins inside the lower receiver.

d. **Rear Sight Assembly.** Apply one drop of CLP to the moving parts listed below. Rotate parts to ensure lubricant is spread evenly.

**NOTE**

Note location of sights prior to cleaning and lubrication to ensure sights are returned to their original position at completion of task.

- (1) Windage screw.
- (2) Rear sight cylinder.
- (3) Locking Screw.

---

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS -  
CONTINUED**

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4. **Lubrication After Amphibious Operations.** Thoroughly rinse the rear sight in fresh water until the tactical situation allows for thorough cleaning and lubrication.

**END OF WORK PACKAGE**

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**GENERAL MAINTENANCE INSTRUCTIONS**

---

**THIS WORK PACKAGE COVERS**

Scope, Work Safety, General Information, Cleaning Instructions, Inspection Instructions, and Lubrication Instructions.

---

**INITIAL SETUP****Maintenance Level**

Operator

**References**

WP 0011 00

WP 0013 00

WP 0018 00

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**GENERAL MAINTENANCE INSTRUCTIONS - CONTINUED**

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**SCOPE**

These general maintenance instructions contain general shop practices and specific methods you must be familiar with to properly maintain the G-3 rifle.

**WORK SAFETY**

1. Before starting a task, think about the risks and hazards to your safety as well as that of others. Wear protective gear such as safety goggles or lenses, safety shoes, rubber apron, and gloves.
2. Observe all WARNINGS, CAUTIONS, and NOTES.

**GENERAL INFORMATION****CAUTION**

DO NOT mix lubricants on the same weapon. The weapon must be cleaned thoroughly during any change from one lubricant to another. Dry cleaning solvent (SD) is recommended for cleaning before changing lubricants.

When the term lubricant is cited in this TM, it is to be interpreted to mean Cleaner, Lubricate, and Preservative (CLP); Lubricant, Semi-fluid, Automatic Weapons (LSA); or Lubricant, Arctic, Weapons (LAW).

1. Disassemble, clean thoroughly, inspect, and lubricate the weapon.

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**GENERAL MAINTENANCE INSTRUCTIONS - CONTINUED**

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2. Always shake CLP prior to use.
3. After firing, clean the weapon with CLP according to instructions in WP 0013 00. Wipe dry and lubricate according to instructions in WP 0011 00.

**NOTE**

Contact unit armorer if parts from cleaning kit are missing or defective.

4. Cleaning materials (e.g., patches, pipe cleaners, and CLP) are expendable items. For a complete list of cleaning materials refer to WP 0019 00.

**CLEANING INSTRUCTIONS****NOTE**

Use only CLP for cleaning and lubrication in all but the most severe conditions.

Cloths or rags saturated with CLP must be disposed of in accordance with authorized facilities' procedures.

Cleaning instructions are the same for the majority of the parts and components of the weapon.

---

**GENERAL MAINTENANCE INSTRUCTIONS - CONTINUED**

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The importance of cleaning must be thoroughly understood by maintenance personnel. Great care and effort are required in cleaning. Dirt and foreign material are a constant threat to satisfactory maintenance. The following apply to all cleaning, inspection, repair, and assembly operations:

- a. Clean all parts before inspection, after repair, and before assembly.
- b. To prevent contamination, hands should be kept free of any accumulation of grease, which can collect dust, dirt, or grit.
- c. After cleaning, all parts should be covered or wrapped to protect them from dust and dirt. Parts that are subject to rust should be oiled lightly.

1. **Cleaning Disassembled Parts.**

- a. Dry and cover all cleaned parts.
- b. All parts subject to rusting must be oiled lightly and wrapped.
- c. Keep all related parts and components together. Do not mix parts.

---

**GENERAL MAINTENANCE INSTRUCTIONS - CONTINUED**

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**2. Castings.**

- a. Clean inner and outer surfaces of castings with CLP.
- b. Use a stiff brush to remove sludge and gum deposits.

**3. Machined Surfaces.**

- a. Clean machined surfaces with CLP.
- b. Dry surfaces thoroughly.

**4. Mated Surfaces.** Lightly coat with CLP and wrap all parts subject to rust before storing.**INSPECTION INSTRUCTIONS**

- 1. **General.** All components and parts must be checked carefully to determine if they are serviceable for reuse or if they must be scrapped.

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**GENERAL MAINTENANCE INSTRUCTIONS - CONTINUED**

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2. **Castings.**
  - a. Replace all cracked castings.
  - b. Inspect machined surfaces for nicks, burrs, or raised metal. Mark damaged areas for repair or replacement.
  - c. Inspect all screws and screw openings for damaged or stripped threads.
3. **Machine-Tooled Parts.** Inspect for cracks, breaks, elongated holes, wear, and chips.
4. **Machined Surfaces.** Inspect for cracks, evidence of wear, galled or pitted surfaces, burrs, nicks, and scratches.
5. **Mating Surfaces.** Inspect for seal, secure fit, and pitting.
6. **Rusted Surfaces.** Inspect for pitting, holes, and severe damage.
7. **Internal Parts.** Inspect for cracks, nicks, burrs, evidence of overheating, and wear.
8. **Externally Exposed Parts.** Inspect for breaks, cracks, rust damage, and wear.
9. **Springs.** Inspect for broken, collapsed, and twisted coils.

---

**GENERAL MAINTENANCE INSTRUCTIONS - CONTINUED**

---

**LUBRICATION INSTRUCTIONS**

Refer to *Preventive Maintenance Checks and Services (PMCS), Including Lubrication Instructions* (WP 0011 00) for detailed, illustrated instructions on proper lubrication. The following are some general practices to remember:

1. Use correct lubricant.
2. Keep lubricants clean.
3. Lubricate clean, disassembled, and new parts to prevent rust.

**END OF WORK PACKAGE**

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**WEAPON CLEANING**

---

**THIS WORK PACKAGE COVERS**

Cleaning the Weapon.

---

**INITIAL SETUP**

**Maintenance Level**

Operator

**References**

WP 0005 00

WP 0011 00

WP 0014 00

**Materials/Parts**

Cleaner, Lubricant, and Preservative (CLP)

Cleaning kit

Pipe cleaner

Rag, wiping

**Equipment Conditions**

Weapon field stripped (WP 0014 00)

---

**WEAPON CLEANING - CONTINUED**

---

**WARNING**

Ensure the weapon is clear before performing the following procedures. DO NOT interchange parts from one weapon to another. Failure to follow these warnings may cause injury or death to personnel.

**CLEANING THE WEAPON**

Cleaning is part of scheduled maintenance and should always begin with an inspection of the weapon. Use equipment listed in WP 0018 00 for cleaning and lubrication. The weapon should be cleaned within two hours of firing or as soon as the tactical situation permits.

**1. Field Expedient Cleaning.****NOTE**

After cleaning and before reassembly, lightly lubricate the barrel extension with Cleaner, Lubricant, and Preservative (CLP).

- a. Clear the weapon. Refer to WP 0005 00.
- b. Check the bore and chamber for fouling.
- c. Remove the bolt carrier group. Refer to WP 0011 00.

---

**WEAPON CLEANING - CONTINUED**

---

- d. Clean carbon and oil from the firing pin and all surfaces of the bolt head and bolt carrier group with clean, dry swabs.
- e. Clean the firing pin hole with a pipe cleaner.
- f. Apply a light coating of CLP. Give special attention to mated surfaces.

**CAUTION**

Ensure the swab goes completely through the flash suppressor. Do not reverse direction while the swab is in the bore or compensator.

- g. Swab out the weapon from chamber to muzzle.
2. **Detailed Cleaning Techniques - Standard Kit.**

**NOTE**

Do not interchange parts from one weapon to another.

- a. The bore of the weapon has lands and grooves called rifling.

---

**WEAPON CLEANING - CONTINUED**

---

- b. Allow the swab or bore brush to rotate (following the rifling grooves) as they are pulled through the bore. This will provide better cleaning of the bore and rifling grooves. Follow the procedures below:

**NOTE**

The cleaning process will go more quickly using the “buddy system” on the cleaning rods. Set up one rod with a patch holder and the other with a bore brush.

- (1) Connect three sections of rod, leaving each section approximately two turns of being tight.
- (2) Attach the patch holder to one end of the rod.
- (3) Put a clean patch on the patch holder and apply several drops of CLP to the patch.
- (4) Point the muzzle down. Holding the upper receiver in one hand, insert the end of the rod without the patch holder into the chamber. Allow the rod to fall straight through the bore. Approximately 2-3 in. will stick out of the muzzle.
- (5) Attach the handle section of the cleaning rod to the end of the rod sticking out of the muzzle.
- (6) Pull the patch through the bore and out the muzzle. The rod will twist as it is pulled through.
- (7) Replace the patch and patch holder with the bore brush.

---

**WEAPON CLEANING - CONTINUED**

---

- (8) Remove the handle section from the rod and re-insert the rod into the chamber, down through the bore and out the muzzle.
- (9) Install the handle section on the rod.

**CAUTION**

When using a bore brush, do not reverse direction while the brush is in the bore.

- (10) Pull the bore brush through the bore and out the muzzle. The rod will twist as it is pulled through.
- (11) After one pull, remove the handle section and repeat the process. After three or four pulls, the rod sections are tightened together. Loosen the rod sections and bore brush and repeat the process.
- (12) Pull a patch through the bore occasionally to help remove dirt and debris loosened by the bore brush. Replace the bore brush with the patch holder and a wet patch. Drop it through. Pull a dry patch through the bore occasionally to help remove dirt and debris loosened by the bore brush. Replace the bore brush with the patch holder and a wet patch. Pull the wet patch through. Always have the bore wet with cleaner prior to pulling through a bore brush.

---

**WEAPON CLEANING - CONTINUED**

---

**3. Detailed Cleaning Techniques - with Otis Kit.**

- a. Attach the bore obstruction remover tip to one end of the flexible cleaning rod and attach the slotted tip to the other end of the flexible cleaning rod.
- b. Place the slotted tip into an outside hole on a cleaning patch.

**NOTE**

The size of the swab may be varied by pinching the swab in locations farther from the slot.

- c. Pinch a portion of the patch and insert it through the slot in the slotted tip. Pull this tight as it ties the knot and will ensure the swab scrubs efficiently.
- d. Turn the outer edge of the swab down over itself.

**NOTE**

If done correctly, the swab forms a symmetrical cone that will center the swab in the bore and ensure cleaning 360°.

Always use a clean swab each time it is passed through the bore.

---

**WEAPON CLEANING - CONTINUED**

---

- e. Apply 3 to 5 drops of CLP to the front end of the knot in the swab. Do not dip the swab into the CLP.
- f. Insert the bore obstruction remover tip and flexible cleaning rod into the chamber until the swab enters the receiver.
- g. Use the swab to mop out the receiver and slides.
- h. Holding the flexible cleaning rod by the knurled bore obstruction remover, rotate the rod as the swab enters the locking lugs. Use your fingers or the cleaning brush to force the swab into the recess in front of the locking lugs.

**NOTE**

Give special attention to the areas mentioned in step i, particularly if the weapon has been firing blank rounds.

- i. Continue to turn the swab as it passes through the chamber and enters the neck area.
- j. Continue to pull the flexible cleaning rod and swab through the barrel until the swab exits the flash suppressor.
- k. Remove the swab and slotted tip from the flexible cleaning rod.
- l. Attach the chamber brush to one end of the short chamber cleaning rod and the T-handle to the other end.

---

**WEAPON CLEANING - CONTINUED**

---

- m. Cover the chamber brush with a used swab. Mop out the locking lugs and chamber while turning it in a clockwise direction with the T-handle. Let the brush feed itself into the chamber.
- n. Give the brush and swab several turns while in the chamber, ensuring that the shoulder of the chamber is cleaned.
- o. Turn and pull the brush and swab from the chamber.
- p. Attach the bore brush to the flexible cleaning rod.

**NOTE**

Do not push the bore brush into the bore at first.

- q. Insert the flexible cleaning rod into and down through the bore.
- r. Turn the flexible rod as the bore brush enters the chamber and into the neck. You will feel the brush scrubbing the shoulder of the neck.
- s. Pull the bore brush into and through the bore in a “breech-to-muzzle” direction.
- t. Using a clean, dry swab for each pass through the chamber and bore, repeat steps f through k.
- u. If the swab does not come out clean, repeat steps p through s until the swab comes out clean.

---

**WEAPON CLEANING - CONTINUED**

---

**4. Thorough Cleaning.**

a. **Upper Receiver.** Clean with CLP unless otherwise indicated:

- (1) All areas of powder fouling, corrosion, dirt, and rust.
- (2) Barrel extension, chamber, and gas tube.

**CAUTION**

When using a bore brush, do not reverse direction while the brush is in the bore.

- (3) Bore. Starting at the receiver, drop the rod and brush through the chamber and pull through the flash suppressor.

**CAUTION**

Do not remove the inner heat shield.

- (4) Handguard. Remove and wipe with a cloth.
- (5) Front and Rear Sights. Clean with a brush and CLP.
- (6) Flash Suppressor. Scrub with a brush and clean between the slots.

---

**WEAPON CLEANING - CONTINUED**

---

**b. Bolt Carrier Group.****NOTE**

Use a well-worn bore brush only.

- (1) Scrub the outer and inner surfaces of the bolt carrier with CLP.
- (2) Firing pin recess and firing pin.
- (3) Firing pin hole (use pipe cleaner).
- (4) Carbon deposits and dirt from locking piece and under extractor lip.

**c. Buttstock Assembly.**

- (1) Remove any foreign debris from the exterior using rags and a toothbrush.
- (2) Clean debris with a toothbrush and a small amount of CLP.

---

**WEAPON CLEANING - CONTINUED**

---

**d. Lower Receiver Assembly.**

- (1) Remove any foreign debris from the plastic pistol grip using a toothbrush, swabs, and rags.
- (2) Scrub the top of the hammer, ejector, and the area around the front of the ejector and release lever with a small amount of CLP to break up the carbon fouling.
- (3) Remove all areas of powder, fouling, corrosion, and dirt by using rags and a toothbrush.
- (4) Wipe dirt from the trigger mechanism.

**e. Magazine.**

- (1) Disassemble the magazine. Refer to WP 0014 00.
- (2) Clean with CLP. Wipe dirt from the tube, spring, follower, and base.
- (3) Lightly lubricate the magazine spring.
- (4) Reassemble the magazine. Refer to WP 0014 00.

**END OF WORK PACKAGE**

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**WEAPON MAINTENANCE (FIELD STRIPPING)**

---

**THIS WORK PACKAGE COVERS**

Disassembly/Field Stripping, Reassembly, Magazine Disassembly, and Magazine Reassembly.

---

**INITIAL SETUP****Equipment Conditions**

Weapon cleared

**References**

WP 0005 00

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**WARNING**

Always assume every weapon is loaded until it is determined through visual and physical inspection that it is not. Procedures for clearing and unloading the weapon are outlined in WP 0005 00. Failure to follow this warning may result in injury or death to personnel.

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**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

**DISASSEMBLY/FIELD STRIPPING**

1. Remove the buttstock assembly by removing the two rear takedown pins. Refer to Figure 1.



Figure 1. Remove the Rear Takedown Pins.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

2. Retain the pins in the buttstock's rear takedown pin retainer holes. Refer to Figure 2.



Figure 2. Retain the Pins in the Retainer Holes.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

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3. Remove the buttstock assembly by grasping the buttstock and pulling away from the upper receiver. Refer to Figure 3.

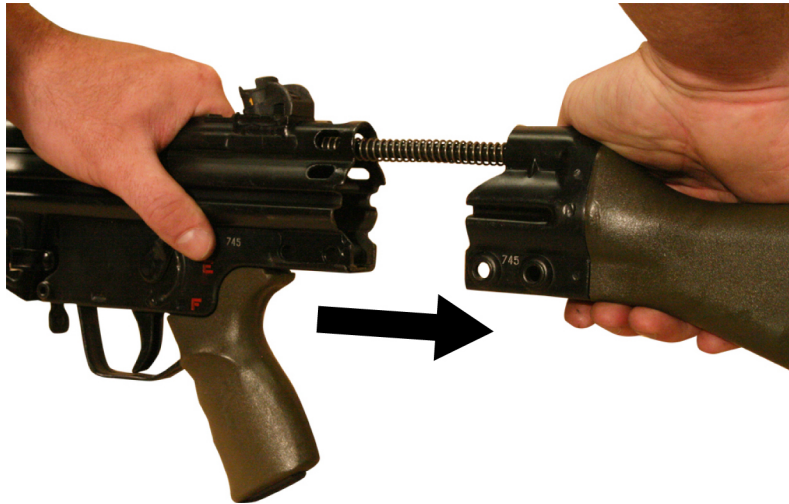


Figure 3. Pull the Buttstock away from the Upper Receiver.

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**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

4. Remove the front receiver takedown pin to disengage the lower receiver. Refer to Figure 4.

**NOTE**

Retain the pin in a uniform pocket.



Figure 4. Remove the Front Receiver Takedown Pin.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

5. Remove the lower receiver by grasping and pulling away from the upper receiver. Refer to Figure 5.



Figure 5. Remove the Lower Receiver.

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**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

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6. To remove the handguard, remove the handguard takedown pin. Refer to Figure 6.

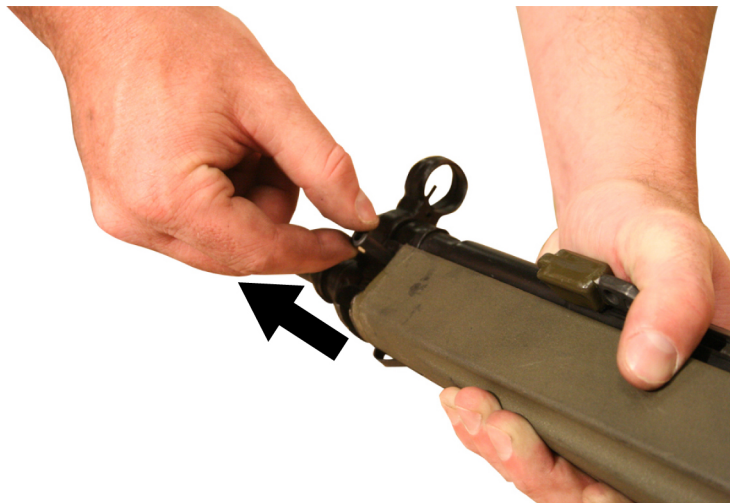


Figure 6. Remove the Handguard Takedown Pin.

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**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

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- a. Separate the handguard from the barrel assembly in two motions: pull the top of the handguard away from the barrel, releasing it. Refer to Figure 7.



Figure 7. Pull the Top of the Handguard away from the Barrel.

- b. Pull the handguard out and away from the barrel.

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**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

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7. Remove the bolt carrier group by pulling the charging handle to the rear. Refer to Figure 8.

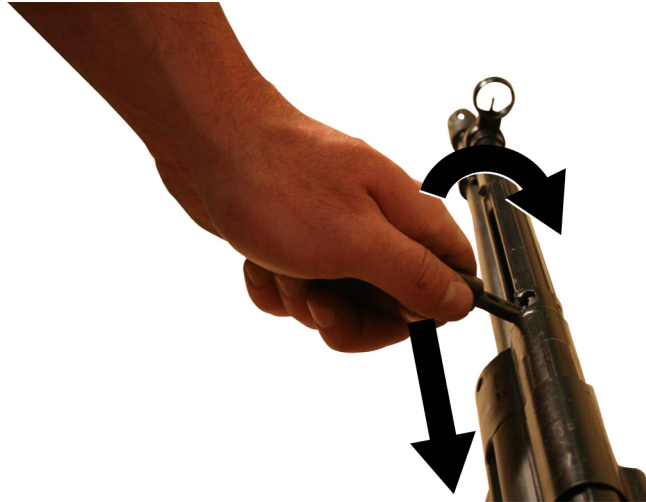


Figure 8. Pull the Charging Handle to the Rear.

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**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

8. Slide the bolt carrier group out of the receiver. Refer to Figure 9.



Figure 9. Slide out the Bolt Carrier Group.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

9. Facing the bolt, rotate the bolt head counterclockwise. Refer to Figure 10.



Figure 10. Rotate the Bolt Head Counterclockwise.

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**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

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10. Pull off the bolt head. Refer to Figure 11.

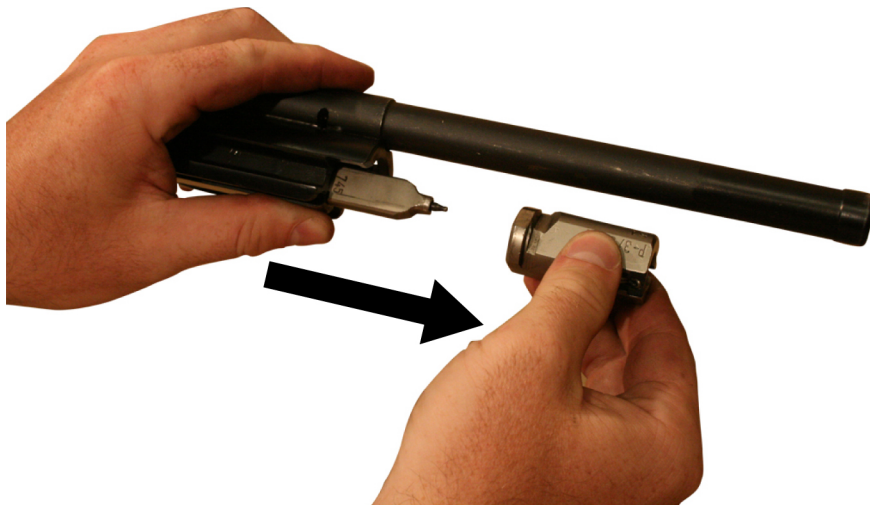


Figure 11. Pull off the Bolt Head.

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**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

11. Remove the locking piece by rotating 180 degrees and pulling off. Refer to Figure 12.

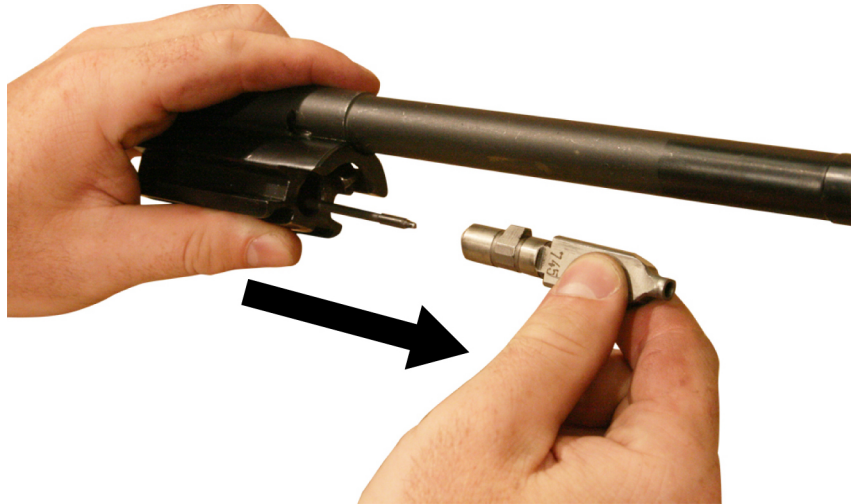


Figure 12. Remove the Locking Piece.

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**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

12. Remove the firing pin and firing pin spring. Refer to Figure 13.



Figure 13. Remove the Firing Pin and Firing Pin Spring.

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**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

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13. Remove the firing pin from the firing pin spring by sliding the spring forward. Refer to Figure 14.

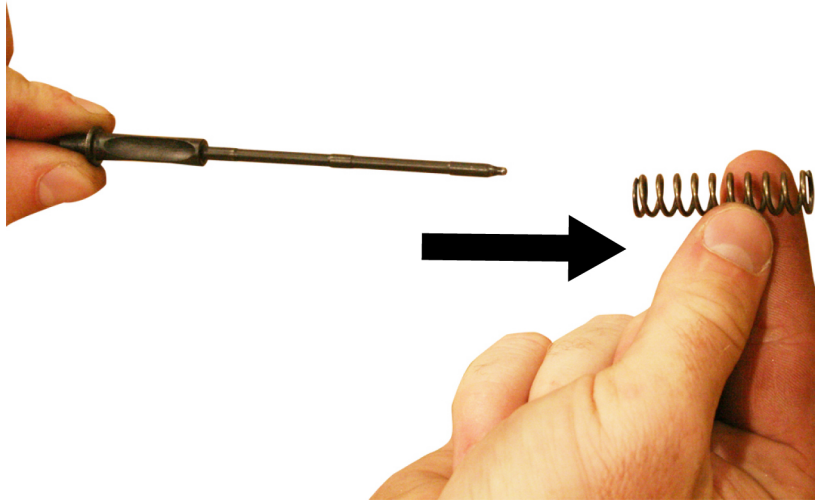


Figure 14. Slide the Firing Pin Spring off the Firing Pin.

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## WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED

---

### REASSEMBLY

1. Place the firing pin spring onto the firing pin, as shown in Figure 15.



Figure 15. Firing Pin Spring Mounted Correctly.

2. Replace the firing pin into the bolt carrier. Refer to Figure 16.

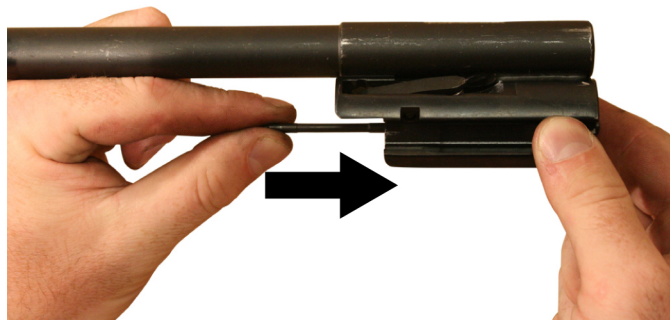


Figure 16. Replace the Firing Pin and Spring into the Bolt Carrier.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

3. Place the locking piece over the firing pin and insert into the bolt carrier by aligning the lug with the cut-out, as shown in Figure 17. Compress and rotate 180 degrees.



Figure 17. Insert the Locking Piece into the Bolt Carrier.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

4. Install the bolt head over the locking piece and compress until a click is heard. Refer to Figure 18. Use a hard surface if necessary.



Figure 18. Compress the Bolt Head and Locking Piece into the Bolt Carrier.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

5. Facing the bolt, rotate clockwise 45 degrees, pull out, then continue to rotate clockwise. Refer to Figure 19. Ensure the locking rollers move freely; the bolt head needs to be in the forward position prior to installing in the upper receiver.



Figure 19. Rotate the Bolt Head.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

**NOTE**

Prior to attaching the lower receiver, ensure the hammer is cocked. The bolt and bolt carrier cannot be installed if the hammer is not cocked.

6. Cock the hammer and attach the lower receiver. Refer to Figure 20.



Figure 20. Attach the Lower Receiver.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

7. Insert the front receiver takedown pin from the left. Refer to Figure 21.



Figure 21. Insert the Front Receiver Takedown Pin.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

8. Attach the handguard to the barrel of the rifle. Refer to Figure 22.



Figure 22. Attach the Handguard.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

9. Replace the handguard takedown pin. Refer to Figure 23.

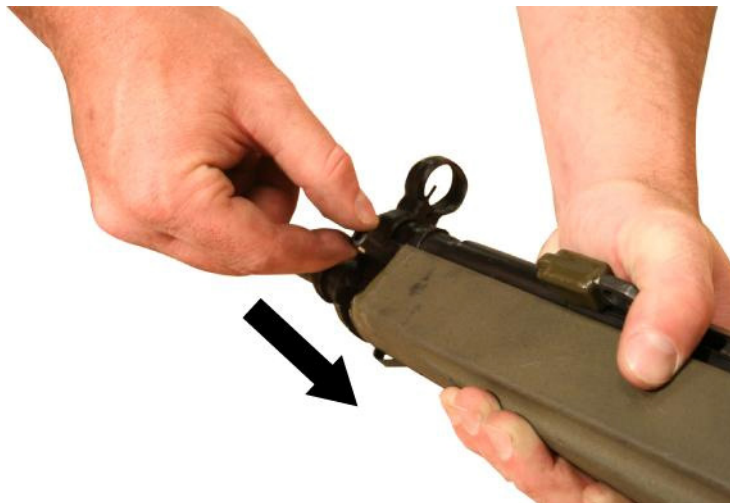


Figure 23. Insert the Handguard Takedown Pin.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

10. Ensure the charging handle is forward in the receiver and the bolt head is in the forward position in the bolt carrier. Insert the bolt carrier into the upper receiver. Refer to Figure 24.

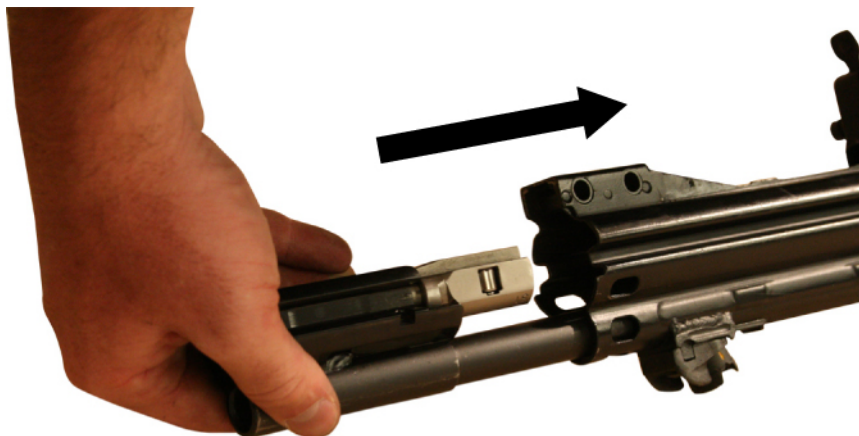


Figure 24. Insert the Bolt Carrier into the Upper Receiver.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

11. Attach the buttstock to the receiver. Refer to Figure 25.



Figure 25. Attach the Buttstock to the Receiver.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

12. Insert the rear takedown pins, one from each direction. Refer to Figure 26.



Figure 26. Insert the Rear Takedown Pins.

---

## WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED

---

### MAGAZINE DISASSEMBLY

1. With a field-expedient tool, depress the magazine retainer. Refer to Figure 27.



Figure 27. Depress the Magazine Retainer.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

2. Slide the magazine plate forward while depressing the retainer. Refer to Figure 28.

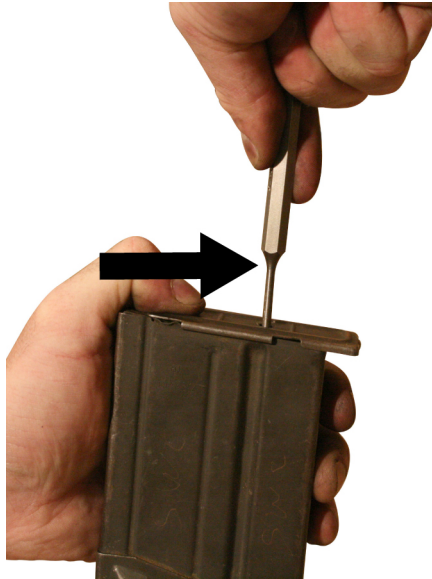


Figure 28. Slide the Magazine Plate Forward.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

3. While cupping the bottom of the magazine, remove the magazine plate. Refer to Figure 29.

**WARNING**

The magazine plate is under spring pressure.



Figure 29. Remove the Magazine Plate.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

4. Pull out the spring. Refer to Figure 30.

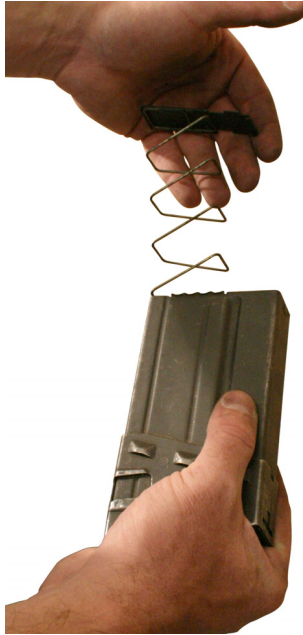


Figure 30. Pull out the Spring.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

5. The magazine is now fully disassembled, as shown in Figure 31.



Figure 31. Disassembled Magazine.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

**MAGAZINE REASSEMBLY**

1. Place the follower in the magazine with the hump of the follower seated against the left side of the magazine. Refer to Figure 32.

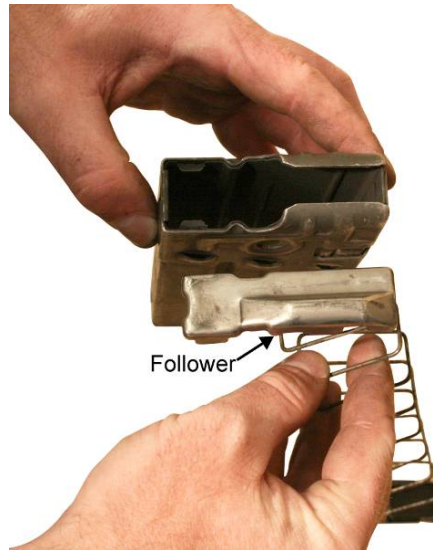


Figure 32. Place the Follower in the Magazine.

---

**WEAPON MAINTENANCE (FIELD STRIPPING) - CONTINUED**

---

2. While compressing the magazine spring, slide on the magazine plate until the magazine retainer locks into place. Refer to Figure 33.



Figure 33. Slide on the Magazine Plate.

**END OF WORK PACKAGE**

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## PREPARATION FOR STORAGE

---

### STORAGE PROCEDURES

#### WARNING

Do not store the weapon with live ammunition in the chamber or magazine. Always assume every weapon is loaded until it is determined through visual and physical inspection that it is not loaded. Refer to WP 0005 00 for clearing and unloading procedures. Failure to follow these warnings may cause injury or death to personnel.

1. **Stored for Extended Periods.** When the weapon is to be stored for an extended period (greater than 90 days), follow the procedures outlined in MCO P4450.7\_, *Preparation for Storage*. Ensure the weapon is thoroughly cleaned as outlined in WP 0013 00.
2. **Storage Procedures.**
  - a. Ensure the chamber and magazine do not contain live ammunition.
  - b. Inspect the bore and chamber and apply a medium coat of Cleaner, Lubricant, and Preservative (CLP).
  - c. Apply a light coat of CLP to all other metal surfaces of the weapon to provide extra lubrication and corrosion protection.

### END OF WORK PACKAGE

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## **CHAPTER 5**

### **SUPPORTING INFORMATION**

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REFERENCES

---

SCOPE

This work package lists all forms, field manuals, technical manuals, tables, regulations, standards, and miscellaneous publications referenced in this manual and relevant to this weapon.

MARINE CORPS ORDERS

Preparation for Storage.....MCO P4450.7\_  
NBC Decontamination ..... MCWP 3-37.2A\_ and MCWP 3-37.3\_

TECHNICAL BULLETINS/INSTRUCTION MANUALS/ORDERS

Corrosion Control for Marine Corps Ground Equipment ..... TM 3080-25/2\_  
Ground Equipment Record Procedures ..... TM 4700-15/1\_  
Organizational Corrosion Prevention and Control Procedures for USMC Equipment..... TM 4795-12/1\_  
Organizational Maintenance Manual with Repair Parts List for Rifle, 7.62 MM, G-3.....TM 8370-50117-IN/20  
Military Use of Cleaner, Lubricant, and Preservative (CLP) for Weapons and Support Equipment..... TM 9150-15/1\_

FORMS

Weapon Custody Receipt Card ..... NAVMC 10520  
Memorandum Receipt for Individual Weapons and Accessories ..... NAVMC 10576  
Recommended Changes to Technical Publications.....NAVMC 10772

END OF WORK PACKAGE

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## SUPPLY SYSTEM RESPONSIBILITY ITEMS (SSRI) LIST

---

### SCOPE

This work package lists Supply System Responsibility Items (SSRI) required for operation of the 7.62 mm, G-3 rifle. The list contains SSRI that are essential for operating the end item.

### EXPLANATION OF COLUMNS

1. **Column (1) - Item Number.** This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item.
2. **Column (2) - Level.** This column identifies the lowest level of maintenance that requires the listed item.  
**C - Operator/Crew**
3. **Column (3) - National Stock Number.** This is the NSN assigned to the item which is used when requisitioning an item.
4. **Column (4) - Description, Part Number, and Commercial and Government Entity Code (CAGEC).** This provides the other information needed to identify the item.
5. **Column (5) - Unit of Measure (U/M).** This code shows the physical measurement or count of an item, such as gallon (GL), dozen (DZ), gross (GR), kit (KT), each (EA), package (PG), bottle (BT), etc.
6. **Column (6) - Quantity Recommended (QTY REC'M).** Qty Rec'm indicates the quantity recommended.

---

**SUPPLY SYSTEM RESPONSIBILITY ITEMS (SSRI) LIST - CONTINUED**

---

Table 1. SSRI for the G-3 Rifle.

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description, Part Number, and CAGEC	(5) U/M	(6) QTY REC'M
1	C	1005-LL-MC9-2697	Rifle, 7.62 mm, G-3 P/N TBD; CAGEC TBD	EA	1

**END OF WORK PACKAGE**

---

**USING UNIT RESPONSIBILITY ITEMS (UURI) LIST**

---

**SCOPE**

This work package lists unit using responsibility items (UURI) that are authorized for support of the G-3 rifle. Items listed will not be issued with the weapon and must be requisitioned through the system.

**EXPLANATION OF COLUMNS**

1. **Column (1) - National Stock Number**. Indicates the National Stock Number (NSN) assigned to the item that will be used for requisitioning purposes.
2. **Column (2) - Description, Part Number, and CAGEC**. Indicates the Federal item name followed by a minimum description when needed. The entry for each item ends with the Commercial and Government Entity Code (CAGEC) proceeded by the part number.
3. **Column (3) - Usable on Code**. Indicates a code if the item needed is not the same for different models of equipment.
4. **Column (4) - Unit of Measure (U/M)**. Indicates how the item is issued for the NSN shown in Column (1), such as package (PG), kit (KT), each (EA), bottle (BT), etc.
5. **Column (5) - Quantity Recommended (QTY REC'M)**. Indicates the quantity recommended.

---

**USING UNIT RESPONSIBILITY ITEMS (UURI) LIST - CONTINUED**


---

Table 1. UURI for the G-3 Rifle.

(1) National Stock Number	(2) Description, Part Number, and CAGEC	(3) Usable on Code	(4) U/M	(5) QTY REC'M
1005-00-288-3565	Patch, cleaning, small caliber, 7.62 mm P/N 5019316, CAGEC 19204		PG	10
1005-00-494-6602	Brush, cleaning, small arms P/N 8448462; CAGEC 19204		EA	1
TBD	Magazine, cartridge: 20 round P/N TBD; CAGEC TBD		EA	6
1005-01-451-5119	Cleaning kit, gun, (7.62 mm, Otis, soft belt pack) P/N 308-6; CAGEC 01VS3		KT	1
<b>OTIS, 7.62 MM CLEANING KIT CONSISTS OF:</b>				
TBD	Case, soft pack (w/ ALICE clips) P/N 915-DMR, CAGEC 01VS3		EA	1
1005-01-449-8902	Handle, Tee P/N 01-5; CAGEC 01VS3		EA	1
1005-01-445-6798	Brush, lens, mohair P/N 3762; CAGEC 01VS3		EA	1

---

**USING UNIT RESPONSIBILITY ITEMS (UURI) LIST - CONTINUED**


---

Table 1. UURI for the G-3 Rifle - Continued.

(1) National Stock Number	(2) Description, Part Number, and CAGEC	(3) Usable on Code	(4) U/M	(5) QTY REC'M
<b>OTIS, 7.62 MM CLEANING KIT CONSISTS OF: - CONT'D</b>				
9150-01-102-1473	Cleaner, Lubricant, and Preservative, P/N CLP-NC; CAGEC 65983 (2/3 oz)		BT	1
1005-01-445-5889	Handle, rod, female P/N 9098; CAGEC 01VS3		EA	1
1005-01-445-6728	Patch, small caliber, 7.62 mm, circular P/N 970; CAGEC 01VS3		PG	10
1005-01-449-9674	Adapter, NATO P/N 316-5; CAGEC 01VS3		EA	1
1005-01-449-8999	Brush, bore, 7.62 mm, P/N 330; CAGEC 01VS3		EA	1
1005-01-449-9282	Brush, chamber, .45 cal, P/N 345, CAGEC 01VS3		EA	1
TBD	Reflector, bore, P/N 905-1, CAGEC 01VS3		EA	1

---

**USING UNIT RESPONSIBILITY ITEMS (UURI) LIST - CONTINUED**


---

Table 1. UURI for the G-3 Rifle - Continued.

(1) National Stock Number	(2) Description, Part Number, and CAGEC	(3) Usable on Code	(4) U/M	(5) QTY REC'M
<b>OTIS, 7.62 MM CLEANING KIT CONSISTS OF: - CONT'D</b>				
1005-01-449-8928	Brush, end, nylon P/N 318-5; CAGEC 01VS3		EA	1
1005-01-449-8934	Rod, flex, 30" P/N C-30-5; CAGEC 01VS3		EA	1
1005-01-452-8675	Rod, flex, 8" P/N C-8-5 CAGEC 01VS3		EA	1
1005-01-449-9943	Pick, gas port P/N 100-39-5; CAGEC 01VS3		EA	1
1005-01-445-6799	Brush, compact, all-purpose (A/P) P/N 324 CAGEC 01VS3		EA	1
1005-01-445-6797	Scraper P/N 206K CAGEC 01VS3		EA	1
1005-01-449-9254	Tip, slotted, 7.62 mm P/N 203-5 CAGEC 01VS3		EA	1

---

**USING UNIT RESPONSIBILITY ITEMS (UURI) LIST - CONTINUED**


---

Table 1. UURI for the G-3 Rifle - Continued.

(1) National Stock Number	(2) Description, Part Number, and CAGEC	(3) Usable on Code	(4) U/M	(5) QTY REC'M
<b>OTIS, 7.62 MM CLEANING KIT CONSISTS OF: - CONT'D</b>				
1005-01-449-8908	Remover, obstruction, 7.62 mm P/N 105-5 CAGEC 01VS3		EA	1
<b>END OF OTIS, 7.62 MM CLEANING KIT</b>				
6515-00-905-1473	Applicator, disposable (Q-tip) P/N 25-806-2WC CAGEC 52127		PG	10
9150-00-935-6597	Lubricating oil, semi-fluid P/N MILL4600; CAGEC 81349 (2 oz)		BT	A/R
9150-00-889-3522	Lubricating oil, semi-fluid P/N 8436793; CAGEC 19204 (4 oz)		BT	A/R

**END OF WORK PACKAGE**

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## EXPENDABLE AND DURABLE ITEMS LIST

---

### SCOPE

This work package lists Expendable and Durable Items you are authorized for support and operation of the G-3 rifle.

### EXPLANATION OF COLUMNS

1. **Column (1) - Item Number.** This number is assigned to the entry in the list.
2. **Column (2) - National Stock Number.** This is the NSN assigned to the item that will be used for requisition.
3. **Column (3) - Item Identification.** This provides the other information needed to identify the item.
4. **Column (4) - Unit of Measure (U/M).** This code shows the physical measurement or count of an item, such as each (EA), quart (QT), bottle (BT), package (PG), box (BX), or bale (BE).

---

**EXPENDABLE AND DURABLE ITEMS LIST - CONTINUED**


---

Table 1. Expendable and Durable Items for G-3 Rifle.

(1) Item Number	(2) National Stock Number	(3) Item Identification	(4) U/M
1	9150-01-102-1473	Cleaner, Lubricant, and Preservative (CLP) (65983) (2/3 oz)	BT
2	9920-00-292-9946	Cleaner, tobacco pipe (89855)	BX
3	9150-00-292-9689	Lubricant, Arctic, Weapons (LAW) (81349) MIL-L-14107 1 qt (0.95 L)	QT
4	9150-00-889-3522	Lubricant, Semi-fluid Automatic Weapons (LSA) (19204) (4 oz)	BT
5	1005-00-288-3565	Patch, small caliber, 7.62 mm	PG
6	1010-01-445-6728	Patch, small caliber, 7.62 mm, circular	PG
7	6515-00-905-1473	Applicator, disposable (Q-tip)	PG
8	7290-00-205-1711	Rag, wiping (58536) A-A-531 (50 lb, 22.68 kg)	BE

**END OF WORK PACKAGE**

---

**INVENTORY SHEET**


---

Table 1. Inventory Sheet.

Item No.	National Stock Number	Item ID	Unit of Measure														
			Qty Used in Unit														
			Month														
					J	F	M	A	M	J	J	A	S	O	N	D	
1	9150-01-102-1473	Cleaner, Lubricant, and Preservative (CLP), 2/3 oz	EA	1													
2	005-00-494-6602	Brush, cleaning, small arms	EA	1													
3	1005-01-451-5119	Cleaning kit, 7.62 mm, Otis (soft belt-pack)	KT	1													
OTIS, 7.62 MM CLEANING KIT CONSISTS OF:																	
4	TBD	Case, soft pack	EA	1													
5	1005-01-449-8902	T-Handle	EA	1													
6	9150-01-102-1473	Cleaner, Lubricant, and Preservative	EA	1													

---

**INVENTORY SHEET - CONTINUED**


---

Table 1. Inventory Sheet - Continued.

Item No.	National Stock Number	Item ID	Unit of Measure													
			Qty Used in Unit													
			Month													
					J	F	M	A	M	J	J	A	S	O	N	D
<b>OTIS, 7.62 MM CLEANING KIT CONSISTS OF: - CONT'D</b>																
7	1005-01-445-6798	Brush, lens, mohair	BT	1												
8	1005-01-445-5889	Handle, rod, female	EA	1												
9	1005-01-445-6728	Patch, small caliber, 7.62 mm, circular	EA	1												
10	1005-01-449-9674	Adapter, NATO	EA	1												
11	1005-01-449-8999	Brush, bore, 7.62 mm	EA	1												
12	1010-01-445-6799	Brush, end	EA	1												

---

**INVENTORY SHEET - CONTINUED**


---

Table 1. Inventory Sheet - Continued.

Item No.	National Stock Number	Item ID	Unit of Measure													
			Qty Used in Unit													
			Month													
					J	F	M	A	M	J	J	A	S	O	N	D
<b>OTIS, 7.62 MM CLEANING KIT CONSISTS OF: - CONT'D</b>																
13	1005-01-449-9282	Brush, chamber, .45 cal	EA	1												
14	TBD	Bore lite, fiber optic	EA	1												
15	1005-01-449-8928	Brush, end, nylon	EA	1												
16	1005-01-445-6798	Rod, flex, 30"	EA	1												
17	1005-01-445-4889	Rod, flex, 8"	EA	1												
18	1005-01-449-9943	Pick, gas port	EA	1												

---

**INVENTORY SHEET - CONTINUED**


---

Table 1. Inventory Sheet - Continued.

Item No.	National Stock Number	Item ID	Unit of Measure													
			Qty Used in Unit													
			Month													
					J	F	M	A	M	J	J	A	S	O	N	D
<b>OTIS, 7.62 MM CLEANING KIT CONSISTS OF: - CONT'D</b>																
19	1005-01-449-6728	Brush, compact, all-purpose (A/P)	EA	1												
20	1005-01-449-9674	Scraper	EA	1												
21	1005-01-449-8999	Tip, slotted, 7.62 mm	EA	1												
22	1005-01-449-9282	Remover, obstruction, 7.62 mm	EA	1												
<b>END OF OTIS, 7.62 MM CLEANING KIT</b>																

**END OF WORK PACKAGE**

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